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EDITED BY

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Fellow of American Academy of Medicine, *Etc.*

STORAGE

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THE
CINCINNATI MEDICAL NEWS.

VOL. XIV. No. 165. Old Series. SEPTEMBER, 1881. VOL. X. No. 9. New Series.

ORIGINAL CONTRIBUTIONS.

Oinology.

(Discourse upon Wine.)

A Scientific Subject Popularized—Effects of Oinopotic Dissipation—Different Effects of Different Liquors—Indians Not Able to Bear Whisky and Why—Ratio of Mortality from Different Kinds of Liquors.

BY S. E. M'KINLEY, A. M., M. D., CHICAGO, ILL.

ANY investigations conducted with a view of shedding additional light upon the science of life and its various phenomena, can arrive at no more satisfactory conclusions than those now held, until a more definite knowledge is obtained regarding the part performed on the body by oxygen, as it concerns nutrition and its handmaid, waste. Constant familiarity with the same makes us careless of the vast magnitude and gorgeous splendor of that orb. A life-long intimacy with our own names renders us careless to inquire the circumstances or occasions which imparted them. So, too, of the oxygen we breathe, and without which there could be no life, no light, no fire, no water, no bread, no animals of the earth, or of the sea, or fowls of the air, nor would there be any world. And if oxygen confined itself to the function of the lungs only in animate creation, what would drive our machinery? There would be no steamboats or locomotives, evidently; nor is it likely that the telegraph would work satisfactorily, if we had such an invention. Its influence over the human body is that which concerns the student of medicine most, and until he arrives at a more definite insight to the part oxygen plays in the processes of nutrition and molecular waste, and how, also, therapeutic agents impress or influence them, his duties as a healer will be clogged by the mazes of conjecture and uncertainty. We can not jump at a single bound to the point we desire to reach in this connection. We must go slowly and carefully, but surely, through the intricate niceties of scientific inquiry to reach it.

The writer, being a student in this direction, will here illustrate the effects of alcoholics. He will lead the reader to the examples of the highest stages of nutrition, and the perfection of animal development. He will show how this is attained through the oxydizing phenomena in its unrestrained freedom, and in contradistinction to this will show the lowest stages of nutrition and imperfection of animal development, as resulting from the abridgement of the oxydizing phenomena.

The highest example of alterative influence over the human body, beyond all comparison, is orchiotomy. This is inferentially true in the absence of repeated illustrations, which establish it as a fact. Comparison is the fulcrum to the mind, and without it could make no progress in reasoning; there could be no reasoning, for we can only reason from it as a basis on which the mind is to take its leverage.

While man is the illustrious example of his CREATOR'S chiefest, highest, best creation, it does not follow that he bears no resemblance in his physical and mental conformation to the dog, and the ass, and the ox.

The first glimmering ray of light that beamed upon the human mind to lead it to a scientific insight to man's physical structure was gleamed from the dissection of animals. While this may seem humiliating to our vaunted dignity, it in no manner violates, but, on the contrary, elevates it from the assurance it conveys of our superiority to things below us, forming mere comparisons to us. This operation upon animals changes the quality, and develops a higher and more prolonged nutrition. The pig or other animal, unfit for food in his *entire* condition, has the quality of nutrition changed by orchiotomy, and is thus rendered fit for the larder. The cat becomes fat, lazy and worthless, so also the dog; the fowl increases to double his normal weight and size; the calf outstrips his *entire* mate in a growth and proportion that continue far beyond the years which limit the full maturity of the latter; the horse loses his effrontery, becomes docile, safe and useful, while his development is increased without loss of symmetry, agility, strength or endurance. Geldings have made the longest races on the turf in running, and the quickest time in pacing or trotting on the course.

These remarkable and desirable alterations are effected through increased and prolonged nutrition, and man forms no exception to animals when subjected to the operation which occasions them.

Ecclesiastical orchiotomy has this influence to a remarkable degree also, as illustrated in the clergy of churches whose tenets require celibacy in their ministry. They eat and drink temperately, labor hard in cold or warm weather, and rise in winter to celebrate måss by, and frequently before, daylight, in cold chapels; aided by this temperance and the austerity of their lives, but one in seven hundred violates his chastity when overwhelming temptation assails him. They are uniformly healthy, and a sick priest or an ill nun is a rare sight indeed. But this does not hold good in a married priesthood. These are significant truths, and excite a reflection which runs far back to the past, then wheeling round sweeps forward, passing the present into the distant future, gathering on its way the evidences it has gleaned.

Next to orchiotomy as an alterative stands oinopotic* dissipation. It revolutionizes its votaries. The moderately sane man is transformed into a crazy one—moderate, we say, because it is a dubious sanity that yields itself to the influence of alcoholic drinks. It is the example of the most extraordinary alteration to which mankind are amenable, except the loss of the appendages which indicate the quality of sex. Both are achieved through their influence over nutrition and oxidation. The latter, by increased constructive metamorphoses and a correlative waste; the former, by diminishing destructive metamorphoses of tissue, and thus abridging the construction of tissue in diminishing the oxydizing processes.

Orchiotomy leads to an increased size of all the organs

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*From the Greek word *oinos*—wine, and the Latinized Greek word *poto*—to drink.

concerned in the digestive and nutritive processes. The lungs, which form the port of entry for the oxygen that drives forward the growth, and then forming new compounds liberates them as debris, are greatly augmented; thus affording a *pro rata* increase in the volume of oxygen. The heart, arteries, veins, liver, spleen, intestines, fat, muscles, bones, and, not least of all, the compass of voice, are increased. To secure the latter, orchiotomy has been practiced in the East from the earliest ages. The whole respiratory system is changed from the increased dimensions gained in this operation; and if the animal be a Flemish horse, such as may be seen in the brewery wagons of London, or the drays of Liverpool, a huge and useful animal is developed, a very giant of strength, from eighteen to twenty-two hands high, from a medium sized sire and dam.

As the example of the highest perfection of nutrition and physical development is found as the result of orchiotomy, and proceeding from the primary influence it induces, viz.: an augmented respiratory function, as before stated, so on the contrary, the greatest imperfection of nutrition is derivable from oinopotic dissipation by inducing the very opposite state of affairs,viz.: abridging the respiratory function, and its ulterior retardation of molecular waste from the body. Diminishing the play of the lungs, the oxydizing processes are curtailed, and the new compounds formed by the oxygen are retained, thus affording a *pro rata decrease* in the volume of oxygen. Here, then, the heart, arteries, veins, liver, spleen, intestines, fat, muscles, bones, and, not least of all, the compass of the voice are diminished in size. The whole system of nutrition is comparatively, and to some extent absolutely, and, therefore, hopelessly, broken down. Structural changes are apparent throughout, and as this applies to the brain also, the victim of oinopotic dissipation is demoralized in proportion to the degree of injury the brain has sustained in the overwhelming wreck, once the example of a ceremonious propriety, and the support of a prosperous business, and the adorning light of his circle of acquaintance, when in the first stage of habitual inebriation, he is now a trembling column of regret to himself and all who knew him in earlier days. All dignity, all sense of propriety is now lost. Unfitted longer to conduct his once prosperous affairs, they too, like himself, have fallen into decay. He stalks abroad idly in midday, revels in the noisy throngs of early evening, and prolongs his unhallowed orgies until the noontide hours of night, and often until the shrill notes of the early newsboy pipes forth the existence of the new-born day. Then he hies in oscillating gait to his home (?) and, undenuded of coat, boots or hat, hibernates beneath the bedding in sigmoid flexions till night, when he again sallies forth. Night with him is day, and day is night. He is an *oinomaniac.* Alcohol is his only cry, and it is unceasing. This mania mows down with its broad scythe more men than pestilences or famines; it swallows up more men than shipwrecks or earthquakes; it is an insatiable gulf. Whisky, brandy, rum, gin! what a fearful catalogue of ills these names suggest. Arson, theft, murder, rape, suicide! poverty, penury, disgrace, prison! grief, tears, treachery, blighted hopes, infanticide! adultery, illicit elopements, abortion, divorce! Hell on earth, and hell beyond! (Orthodoxy.) But talking does no good. Parental admonition is useless. The tears of wives, mothers, sisters and brothers are shed without effect. The sweetheart's affectionate remonstrance is alike unavailing, for when once the victim gets into the mazy pool of indispensable inebriation, in nineteen cases out of twenty he remains in it until swallowed up. The habitual inebriate in the advanced stage which this monograph contemplates is an abnormal phenomenon; he exhales a gaseous, and drinks a liquid fire. He sees globular scintillations in incalculable thousands passing in review before his heated brain. He hears unearthly sounds careering in wild and frenzied jubilee amid the distorted beings his diseased imagination has summoned forth. He smells imaginary odors, which he attemps to describe in the language of indecorous epithet. His urine is scalding hot, and of a high specific gravity, and his alvine evacuations emit a fetor unrivaled by the stench of a chloatic vault being emptied at midnight. He is a walking and migratory, and certainly a very gyratory monument of combustion. His very existence seems to be a libel upon the laws which govern the principles of human vitality. He is a living and moving lie to himself, and also to the science which has hitherto attempted to account for his existence under the circumstances. That he should die loaded as he is with compound complications of bodily and mental disease, to which is superadded every moral deformity recorded in the lexicon of vice, so readily bestowed by a censorious world, and hurled at his devoted head, is not matter of surprise; but to the overwhelming astonishment of the medical scholar he lives! lives to confute his educated views of the principles of human life. That the elements of respiration, and the plastic elements of nutrition should be in just proportion; that no great or prolonged departure from the physiological state is compatible with life, the medical man has been taught. But here he sees this law ignored in the habitual inebriate, where the elements of nutrition are not only withheld for days, but for weeks and months. The organs of digestion idle and diseased; the assimilating process stopped; on what, then, does the inebriate subsist? The only answer that can well be given is, combustion—pent up molecular waste. And is it not correct when we consider that he lives solely on non-azotized food? He may "force an appetite," it is true, but there seems to be no possible assimilation—no appropriation of the articles eaten. Nitrogenized food is neglected—fat, not lean meat is chosen, if any be eaten at all.

In the habitual inebriate at this stage of his career, the natural order of things is reversed; with him the normal has become the abnormal, and the abnormal has become the normal, both as regards his physical condition and his habits. He not only has no appetite for, but is disgusted with, a rational and physiological admixture of aliments. As in his physical movements, he is ever gyrating from the centripetal to the centrifugal; so, too, is he alike capricious in his choice of food, selecting almost exclusively from the non-azotized, and totally avoiding *proteinaceous* compounds.

If the favorite drink has been malt, then we find *mollities cerebri*, or *romollissement du cerveau* of the French pathologists, and the *apoplexie capillaire* of Cruveilhier, a peculiar congestion pointed out by this very able observer. There is softening of the spinal marrow, and the whole membranous system is to a great extent rendered spongy.

The absorbents are impaired, venous congestion exists to a fearful extent, and dropsy ensues in consequence of this condition. But inebriates from malt liquors are generally carried off from valvular disease of the heart, and granular degeneration of the kidneys; the latter become softened and hypertrophied.

Malt liquors create the elements of bile in excess, but promoting the eliminating function of the uropoetic organs, the bile is carried away with the urine.

Ardent liquors create a redundance of bile also, but promoting the hepatic viscus at the same time, it is cast from the system, *via* the intestines; the kidneys being nearly always in a state of congestion from the use of ardent liquors, little bile is eliminated by them.

Malt liquors cause disease of the kidneys from the enormous labor they are constantly taxed with, and granular degeneration of them is due to this and the alcoholic hexis, or oinopotic dyspepsia.

Disease of the kidneys from the intemperate use of ardent liquor is such as proceeds from prolonged congestion.

An alcoholic hexis induced by the *moderate* but *constant* and *prolonged* use of inebriating liquors, leads to confirmed and *indispensable* inebriation, unless the *oinostatic diathesis* which demands the liquor, and from which the appetite for drink both proceeds and is perpetuated, is broken up by an alterative treatment that displaces it.

The long continued use of alcoholic drinks, with the apparent impunity attending it, finds its solution in the vast quantities of chloride of sodium consumed by this class of every community. Salt soups, as had at lunch houses and other oinopotic resorts, accounts for this impunity very largely—salt soup; salt and radish; salt celery; salt sliced turnip; salt-pickled onion; salt-pickled cucumber; salt slaw; salt herring; salt lobster; salt salmon; salt oyster; salt pork; the dissipator in liquor eats both from instinct and intelligently of those things which take, and are not palatable without salt. From the use of these things they escape from much of the danger which attends prolonged dissipation. The salt has effects directly contrary to those of the whisky; the latter diminishes molecular wastes. Salt increases it. The salt, in itself hastening destructive transformation, creates a thirst which water only can wholly allay, and in it is found another resisting force to the whisky. Water increases the oxidizing process, and the thirst created by the salt leads to its consumption in large quantities.

Non-salt-consuming people or nations can not bear the effects of alcoholic liquors. The Indian becomes crazed at one or two drafts, and a third will prostrate him. No efforts as yet resorted to, can bring the Indian to even the remote confines of the civilization of which we boast, and the non-consumption of salt by him furnishes the key to his incorrigibility to the efforts to tame him to our manners and customs of life.* The Indian at our territorial doorsteps, like all the other Asiatic tribes, consumes no salt; and like them too, is far down in the scale of Christian and political civilization.

The Numidian of Africa feasts upon the primitive products of nature without salt. The nomadic tribes of Asia wander from place to place and feed upon a precarious supply unsavored with salt. The wandering Arab on the sandy desert goes for many days, and often for as many weeks without water, and when he finally reaches it, drinks but sparingly, which could or would not be the case if salt had mingled with his light and simple food. Literal nomads, like the cattle they herd, bathe in, but unlike them, drink none or but little of the streams whose banks they meander. This could not inferentially be so if salt formed a commodity for their consumption. Salt has a domesticating influence over the wild herds of every untamed waste, and contributes more than anything else in bringing them to subjection or usefulness.

The consumption of salt marks every step in the ascending scale of civilization, from the Indian† who consumes none or but little, and who is at the foot, up to the highest civilization and refinement, at the top of the scale, where it is an indispensable commodity.

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*When we enter the wild wood to reclaim its denizens, it is with salt and meal in the extended hand of conciliation that secures their approach, and not the yokes and shackles of the plow. I ought to eat the products of domestic culture, they are themselves taught to draw the plow-share. We reach the services of the wild ox through his nutrition. With the Christian code in one hand and the legal code in the other, we approach the untamed Indian. And what have been the fruits of this? Failure in the purposes contemplated. Let him be reached through his nutrition—teach him to dine, and thus teach him Christianity—teach him to dress, and he will learn the laws. As he feels, so is his mind; as he dresses, so are his manners.

Extend the hand freighted with salt and meal, and he will come to "the codes."

† The products of the chase not interred for preservation are suspended in mid air to be desiccated by the sun.

The Esquimaux feasts upon blubber unsavored with salt, and preserves his food in ice and snow to repeat the banquet unmingled with protienaceous aliments.

Like iron as the emblem to mark the steps of artistic progress, and is most in use where civilization is highest, salt is most largely consumed where mental progress is greatest. Those who use it not or but sparingly, like the tribes alluded to, have an imperfect physical and mental development as compared with those who consume it largely.

The castrated ox slakes it in copious quantities and gains vast proportions, while too he is docile and useful. So also the horse. The bull takes it but sparingly, grows slowly, and gains his size early as compared with the former, and is shy and wary of approach.

No period named in history, either written or traditionary, was ignorant of grapes. Inebriating wines were known to mankind cotemporaneously with the inception of vineyard husbandry. Noah is said to have drank wine. And an instance of his departure from the rules of patriarchal dignity and propriety from its excessive use, is named in the biblical history. And his son Ham, on this occasion, was as calamitously wanting in filial decorum as the conduct of his brother was discreet and respectful.

Although wine was made use of at the very cradle of the first fathers of mankind, it was for ages confined to the gentry or patriachs of families. So highly indeed was it esteemed, as to lead to the belief in its being the water intended by the Author of the universe for common use among the "anointed" only. Ordinary people rarely drank it, not from any prohibitory mandate, but from the hereditary belief in its sacredness.

It was the article chosen to symbolize the first miracle performed by the MESSENGER of peace. Marriage had ever been regarded as an august rite, and here its dignity was augmented by HIS presence when HE chose to illustrate HIS miraculous power by rising above the organic law of nature in yielding wine, and procuring it from water. Pagans, while capable of every vice known to gratify the feelings of depravity, can not be said to have been excessive drinkers. They dealt in stupendous wrongs, but sottishness was not included among them. This is remarkable indeed, as it makes them exceptions to their neighbors, who, while better in many respects, were not so in this.

But with Christianity came a purer civilization, and with it came the vast train of wants which culture suggests, and the vice of excessive drinking numbered among them. Ever used with a degree of moderation before Christianity, its excess has been cotemporaneous with the march of Christian civilization and politeness.

The intemperate use of vinous liquors is the great, and all-absorbing, and overwhelming vice of the present age. In the midst of the luminous blaze of Christianity, the basis of the only *true* civilization that can exist to dignify mankind, it stalks abroad in midday and revels in the gay and refined throngs of evening.

Ratio of mortality from oinopotic dissipation.

Habitual inebriation from whisky stills in	4⅓	years.
Brandy, ...	3¾	“
Gin, ...	5	“
Wine, (simple,)	6½	“
English and Scotch malt liquors in . .	7⅓	“
Lager or German beer in	9	“

Malt liquors do not retard molecular waste to so great an extent as the more ardent ones, and thus require a longer period to lead to the final dissolution to which they all tend.

Bacteria and Their Relations to Plant Culture.

BY THOMAS TAYLOR, MICROSCOPIST, DEPARTMENT OF AGRICULTURE, WASHINGTON, D. C.

Read before the Microscopical Section, American Association for the Advancement of Science, Cincinnati, August 18, 1881.

IF we examine, under a high power of the microscope, a small portion of the scum of a fermenting infusion of vegetable matter, numerous particles of a globular shape will be observed, measuring about one twenty-thousandth of an inch in diameter, uniform in size and shape, highly refractive and frequently found in gelatinous masses. These are known as micrococci, or spherical bacteria. Associated with them is generally found another description of germs of the same diameter, but of a rod-like shape, jointed and of various lengths. In common vegetable fermenting infusions they are seldom observed over .003 of an inch in length, and are frequently under .001 of an inch. They have generally an active motion, as seen under a high power (as have also the micrococci), and are known as rod-bacteria (from bacterion, a staff). Botanists of the present day assign both of these organisms to the division algae.

Many investigators believe that certain species of these organisms produce contagious fevers, but there certainly are other species which perform a most useful part in the economy of nature, and in many of our valued industries their active co-operation is absolutely necessary. It is well known that they are the chief agents of fermentation and putrefaction, and it is to the decomposing power they thus exert, in conjunction with the action of the elements, that all organic bodies decay and restore to the earth soluble fertilizing salts, instead of the insoluble and therefore unavailable material of which, in their unchanged state, they are made up. There is high authority for stating that organic substances are not inherently unstable. Under suitable conditions they may remain for an indefinite period wholly unaltered. It is well known that in some portions of the earth the carcasses of dead animals tend to dry up and become mummified. In the arctic region the remains of animals imbedded in ice are kept in perfect preservation for centuries. It is only under conditions more or less favorable to the existence and multiplication of the small organisms which produce fermentation and putrefaction that rapid decay takes place.

Without bacterian fermentation the compost heap of the farmer would remain valueless as plant food. The stubble and the dead grasses of our fields, and the fallen leaves, twigs, branches and trunks of trees would remain comparatively unchanged but for the chemical action excited by the same agency. Fish guano, and all unfermented organic fertilizers, must undergo bacterian fermentation or putrefaction after their application to the soil, or they will remain in a stable form, and their ammonia, locked up in the tissues of which it forms a component part, will fail to yield its return of profit to the farmer. It is asserted that the great nitre beds of India owe their origin to the action of microscopic germs, and the production of nitrate of lime by artificial means presents a similar instance of the results of bacterian action. In this last-named operation animal and vegetable matter combined with lime is laid out in great beds and left for a period of two years, or until fermentation and putrefaction, coupled with the action of the air, have produced nitric acid, when nitrate of lime is formed, to be subsequently converted into nitrate of potash.

Some of the most beautiful colors used in dyeing are produced by subjecting lichens to bacterian fermentation, and the fermentation of stable refuse yields an even heat, which is extensively utilized in the manufacture of white carbonate of lead, as well as in the cultivation of mushrooms and of various early vegetables. The value of the edible fungi thus produced alone amounts in Europe, Asia and America to millions of dollars per annum. The utilization of bacteria and similar organisms in the operations of baking and brewing, and the production of wine and vinegar, is familiar to every household.

While bacterian fermentation or putrefaction is an essential part of the process which fits dead organic matter to become food for plants, the former appears to be an incidental source of one of the common practical difficulties encountered by the farmer and horticulturist, viz.: the tendency of soils to become sour. Some of the lower forms of fungi are denominated "acid formers," and the mode in which these act will, I think, illustrate the process by which sourness of soil is brought about. If we dissolve a little sugar in water, add a small quantity of yeast fungus, and subject the solution to a suitable temperature, fermentation ensues—the sugar is converted into alcohol and carbonic acid, and in process of time the alcohol is oxidized, becoming acetic acid. As the result of some late observations, I am convinced that a similar change often takes place during the progress of those fermentations of which bacteria are the agents, and that these organisms, though in a less distinctive sense, might also be called "acid formers." So far as my observation extends, solutions in which bacterian ferments are in active progress invariably become acidulated, and I have also found that soils in which bacteria and micrococci are revealed by microscopic examination—and I find them in all soils of average fertility—give perceptible acid reactions when tested by litmus paper.

That acidity is so often produced in excessive quantities may be due in part to the character of the unmarketable substances left upon the land in the operations of agriculture, such as the stalks of corn, the stubble of the smaller cereals, decayed grasses, the fallen leaves and twigs of fruit trees, and the roots of field and garden plants in general. In all of these there is a preponderance of cellulose, which substance is resolvable successively into starch, dextrine and glucose, and from this last, as from the solution of sugar in the experiment above referred to, is ultimately produced acetic acid.

The neutralization of the excess of acid in the soil is not the least of the ends subserved by the use of lime and other alkalies in agriculture; but another means which contributes to keep its quantity within wholesome limits is thorough drainage. If the soil of potted plants be not watered with sufficient frequency and copiousness it soon becomes sour, and gardeners have learned by experience to leave at the top of each flower-pot a water space of two inches, more or less, depending on the size of the pot. By filling this space with water as often as necessary the soil is kept sufficiently free from organic acids, which are washed out through the aperture below; and this is precisely similar to what takes place in any well-drained field.

I have already referred to the opinion that certain species of bacteria produce contagious fevers; but from what has been said above, it will be sufficiently apparent that this is by no means the chief function of this class of organisms. However great their baneful activity at times may be, their services to man and to organized existence in general are infinitely greater. Moreover, the former is but occasional and sporadic, while the latter is practically constant and universal. If the materials once used by the life principle in building up organic bodies could not be used over and over again for the same purpose, life must soon cease through the exhaustion of all that is capable of sustaining it. It is in that which has lived, but lives no longer, that life finds the greater part of its sustenance; but, as we have already seen, that vegetable life upon which all animal life ultimately depends can not use this sustenance in the form in which life left it. Before organic matter is available as plant food, it must be reduced almost to its primitive elements; and, as has been pointed out, its reduction is mainly effected through those processes of fermentation and putrefaction, in which bacteria appear to be the most active and important agents. Thus we find among those simple forms of life, which are supposed to have been the first to make their appearance on our planet, and to which, if we accept the theory of evolution, even the most complex of existing organisms owe their origin—an agent which, from the very inception of life upon the earth, has continuously performed a function without which the successive generations of plants and animals could not have existed; and stupendous as is its work, it is an agent so minute that twenty million individuals of its class might be inclosed within a globe small enough to pass through the eye of a cambric needle.

SELECTIONS.

Some Diseases of the Newly-Born.

BY WM. T. PLANT M. D.

Professor of Diseases of Children in Syracuse University, Syracuse, N. Y.

UMBILICAL HEMORRHAGE.

Gentlemen: Besides umbilical inflammation in the young infant, of which we spoke the other day, another danger is sometimes encountered at the same point—viz. hemorrhage. I do not mean the bleeding that may take place from the end of the stump soon after the cord has been tied; that is a preventable accident which need never occur to you if you remember your instruction upon this point; but the hemorrhage of which we speak now is independent of the ligature, and usually occurs at the point where the stump separates from the body. Statistics show that in a large proportion of cases the hemorrhage occurs between the fourth and fifteenth days; that is, between the beginning of ulceration and complete cicatrization at the navel. In a few instances only has it begun directly after birth.

I shall now consider the causes of this hemorrhage. Ordinarily, after the cord is tied, the umbilical vessels become securely plugged by firm coagula. Whatever interferes with this process, by lessening the coagulability of the blood, favors hemorrhage. Foremost among the causes we may reckon a hemorrhagic diathesis, an inherent tendency of the blood peculiar to the individual to remain fluid under circumstances which usually promote coagulation. So strong is this disposition to hemorrhage in some families that many times more than one child of the same parents has perished from this cause. Authors say that if a little of the blood is collected as it oozes from the navel, it will be found to resist coagulation for a long time, and that the clot when formed is without firmness or cohesion.

Certain diseases affect the blood in the same way. Syphilis notably does it. There would seem also to be some obscure connection between umbilical hemorrhage and derangement of the biliary function, for in more than half the cases jaundice is coincident with the bleeding and often precedes it.

Umbilical inflammation may also lead to hemorrhage through ulcerative or gangrenous destruction of tissue.

Symptoms and Course.—Unexpected bleeding, especially in an infant, is alarming. You are summoned then in some haste, and the nurse points you to a blood-stain on the child's clothing. The band being removed and the part cleansed, you may see the blood oozing from the umbilicus. It is not a rapid flow, and it would seem an easy matter to stanch it. Naturally astringents occur to you, and you apply some lint soaked in a solution of persulphate of iron, say one part to six or eight. Over this you lay a compress, and instruct the nurse to keep it in place by a well-applied binder. You then repair to your dwelling happy in the consciousness that you have saved a life.

For an hour, or perhaps for a day or two, your self-gratulation receives no check; but you are nearly certain to be summoned again, to find the blood escaping beneath and around the dressing you have applied. You determine upon another styptic, and select tannin or alum, but with no better result. So other astringents and combinations of astringents are tried, with firm pressure by compress and bandage, often indeed to no purpose, for success with these agents is the exception rather than the rule.

By this time the infant is plainly suffering from loss of blood. It is pale, if not jaundiced; its cry has dwindled to a plaintive whimper; it is almost too weak to nurse. Perhaps a crop of petechiæ scattered over the body show how strong is the disposition to hemorrhage.

Having failed with styptics, you concluded to resort to the ligature. The pedicle being too short to hold the cord, you transfix the integuments crosswise with two needles, and twist the string around them after the form of the figure 8. This done you again feel, if you are without previous experience in this matter, that you are master of the situation; but you are uncommonly fortunate if you do not find within a few hours that the leakage continues in spite of the ligature, even escaping, it may be, from the orifices that the needles have made.

So after efforts oft-repeated, and failures no less often, the infant probably dies, perhaps in one day, perhaps in two or three weeks, the average duration being three to four days. Remember, however, that while the prognosis is in the main unfavorable, a certain small proportion of cases do yield to the above measures.

Fortunately this hemorrhage is a very rare accident. Vogel states that it occurs to but one baby in ten thousand. I happen to have met with two instances, both of which were fatal after a few days.

A case has been reported by Thomas Hill, and is referred to in several works upon children, in which a cure was effected by filling the umbilical depression with liquid plaster of Paris. The fissures that formed as the plaster set were filled with the liquid until the navel was covered with an impervious coating. This is a painless application and easily made. If I should encounter another case I would adopt this method at once, hoping for better success than has usually attended the employment of styptics and transfixion.

I had almost forgotten to say that when jaundice is a prominent symptom, especially when it has preceded the bleeding, I should have some faith in the administration of a cholagogue, such as hydrargyrum cum creta or the mild chloride of mercury.

On Milk-Indigestion in Young Children.

BY EUSTACE SMITH, M. D., F. R. C. P.

THE following timely article we extract from the *British Medical Journal.* It will repay careful perusal:

Children who are brought up in the usual way, upon milk and milky foods, may suddenly begin to exhibit symptoms of indigestion which renders an immediate change in their diet indispensable, if serious consequences are to be avoided. In hand-fed babies this unfortunate accident is common enough, and the mortality among such infants may be, in a great measure, attributed to it. The same thing may occur, however, in children who have been weaned at the usual age; and it is, therefore, sometimes met with in young children twelve or eighteen months old.

These symptoms are due, in the majority of cases, to an inability to digest cow's milk. Usually, the inability is merely a temporary infirmity, arising from some casual derangement of the stomach and bowels, which induces an acid change in the food. In such cases, milk quickly undergoes fermentation in the child's stomach, and an acid is formed which irritates the delicate mucous membrane, and increases the disturbance of the digestive organs. Severe symptoms are often the consequence of this indigestion; so that, unless prompt measures be taken to avert the danger, the child's life may be sacrificed. In other, and less common cases, the fault is in the milk, which is too heavy for a child whose digestive organs are sound and healthy. Thus, infants who are weaned when very young often find cow's milk to be beyond their powers of digestion; and, unless special precautions be taken to adapt it to their immature organs, serious consequences may ensue. Other causes may make cow's milk appear to be indigestible. Thus, the child may be actually overfed, its meals being too large, or too frequently repeated; or, again, the feeding-apparatus may have been neglected, so that fresh milk put into a dirty, sour bottle, may have begun to ferment before the child swallows it. These causes may, however, be put on one side. The kind of milk-indigestion now spoken of is that in which, for whatever reason, a perfectly pure, fresh milk, given in suitable quantities, and with all possible precautions to make it digestible, is found to disagree. In such cases the child begins very quickly to waste, and to show all the signs of defective nutrition. The general symptoms may be divided into three classes, according as to whether the prominent feature is constipation, vomiting, or diarrhœa.

Cases where *constipation* is a marked symptom are generally found among young infants. The child is restless, and begins to be feverish at night. His tongue is coated with a thick, white fur. He is evidently in a state of great discomfort; for his temper is peevish and fretful, his movements are uneasy and jerking, and he occasionally breaks out into piercing cries, drawing up his knees and twisting about his body, under the influence of abdominal pain. At night the griping is especially violent; the child scarcely sleeps at all; or, if he be quiet a moment in uneasy sleep, he soon starts up again, screaming with a fresh attack of pain. The motions are scanty and rare. The bowels sometimes remain confined for twenty-four hours, or longer; and, when they are at last relieved, hard, clay-colored balls, stained with green mucus, are expelled with great effort and straining. These balls consist of masses of hard curd.

A full dose of castor-oil, which clears away the curd, allays the symptoms for a time; but usually, if the milk-diet be continued without any change, they return in a day or two, and the child is in the same distress as before. Violent convulsions may be induced by this cause, and the child's life be put in actual peril.

It is usually in cases of artificial feeding that these symptoms are found; but sometimes, although rarely, we see them in children who are nursed at the breast. When the indigestion is due to catarrh of the stomach, it is readily amenable to treatment. All that is necessary, is to put a stop to the milk for a day or two, and to clear away undigested curd by a full dose of castor-oil. If, however, the fault be in the milk, and not in the digestive organs of the child, some change in the method of feeding is indispensable.

A curious instance of this difficulty in digesting curd in a child, fed solely by the breast, came under my notice some time ago. I was asked by a gentleman to go and see his child, a little boy of seven months old. I found that the child had been suffering for some weeks from severe abdominal pains. He was excessively peevish and fretful, and at night would wake up with a scream, and twist about his body, evidently under the influence of severe griping pain. His bowels were very confined, and the motions consisted almost entirely of curd. He was taking nothing but the breast. Aperients had been found to relieve the child for a time, but the symptoms always returned when the effect of the purgative had passed away. Whenever the breast was stopped for a few days, he immediately improved, but relapsed as soon as suckling was resumed. The child was evidently suffering from his inability to digest the curd of his mother's milk: and it became a matter of the greatest importance to enable him to do so, otherwise he would have to be weaned and fed in a different way. The mother had herself, by taking saline and other medicines, and by making many modifications in her diet. under medical advice, endeavored to alter the quality of her milk, but without success. Several methods of remedying the evil were tried. The intervals between the times of suckling were increased, so as to give a longer period for digestion; but this change had no effect whatever. Alternate meals of barley-water were then given from a feeding-bottle. By this means the quantity of milk taken by the child in the course of the day was diminished, and the interval between the times of taking the breast was still further increased. No improvement, however, followed the alteration. The griping pains still continued; and the constant fretfulness of the child was most distressing to his mother. The plan was at last adopted of giving the child barley-water, from a bottle, immediately before he took the breast, in the hope that, by this means, the milk might be diluted directly it reached the stomach. This method succeeded perfectly, and the child had no further unpleasant symptoms. In this instance, the infant's stomach was in a perfectly healthy state. The fault lay in the mother's milk, which was too heavy for the child's powers of digestion. Should this happen in the case of a wet-nurse, the nurse must be changed, or the child be weaned and brought up by hand.

In the large majority of cases of milk-indigestion in infants reared at the breast, the fault is in the digestive organs of the child; an attack of gastric catarrh having rendered him for the time incapable of digesting his mother's milk. In these cases the indigestion is a temporary failing, and it is easily remedied by suitable treatment. Without judicious management the derangement may be prolonged indefinitely; and it not unfrequently happens that the mother is ordered to wean her baby, under the mistaken notion that her milk is unfit for its support.

In cases of gastric catarrh, where the complaint is acute and severe, *vomiting* is usually the most prominent symptom. Under such circumstances milk becomes a positive poison; and no hope of alleviating the symptoms can be entertained while this diet is persisted with. A short time ago I was asked to see an infant two months old, whom I found suffering from acute gastric catarrh, and in a state of great exhaustion. She had been brought up by hand, and was being fed upon milk and barley-water in equal proportions. This she vomited as soon as it had been swallowed, bringing it up curdled and intensely acid. There was a sour smell from the breath, and, although the disease had only lasted a few days, the eyes were hollow, the face looked pinched, the fontanelle was deeply depressed, and she lay motionless on the nurse's lap, with her eyes half closed. Her hands and feet were cold to the touch, and looked purple. For a day or two her bowels had been much relaxed. She was taking small doses of lead and opium to check the diarrhœa, but each dose was returned almost immediately. The child was ordered to be kept warm and perfectly quiet. A weak mustard-poultice was applied for an hour to the epigastrium. The milk was stopped, and the child was fed with weak veal-broth and thin barley-water, mixed together in equal proportions, and given cold, at intervals, with a teaspoon. A few drops of brandy were given occasionally, as seemed desirable. As a result of this treatment, the vomiting stopped at once, and the child, when seen three days afterward, was found to be much improved. The breath had lost its sour smell, the face was no longer pinched, the eyes were not hollow, the fontanelle was not depressed, and, when asleep, the child closed her eyelids. The motions were still rather watery, although the number was natural. The medicine and diet were continued a few days longer, and the child was soon well. The most important part of the treatment, in this case, was the substitution of veal-broth for milk. Directly the supply of fermentable matter was stopped, fermentation ceased, acid was no longer formed, and the digestive organs returned to a healthy condition. Here the derangement was acute. In the following case the complaint was chronic, the inability to digest cow's milk having extended over a lengthened period.

A little girl, ten months old, with four teeth, very thin and weakly-looking, had been weaned at the age of eight months. Since that time she had been unable to digest milk, vomiting it at once whenever it was given to her. For nearly two months, therefore, she had been fed on two dessertspoonfuls of farinaceous food, made with water into a thick cream, and given every two hours with a spoon. She refused to take it from a bottle. Twice a day the food was made with beef-tea, instead of with water. After a meal the child often vomited, but, when this happened, she was immediately fed again. The result of such a diet was to be expected. The child, although ten months old, was exceedingly weak, and could not sit up. She was rapidly becoming thinner. She slept very little, whining and crying the greater part of the night. She was said to show no signs of abdominal pain; but the bowels acted three times a day, and the motions were relaxed, and horribly offensive. The feet were almost always cold.

Gastric and intestinal disorders in children often date from the time of weaning; partly because at this time they are apt to be largely overfed with farinaceous foods (and it may be remarked that the phrase "food for infants," with which many farinaceous powders are labeled, has been the cause of widespread mortality); partly because the change from human to cow's milk is often made abruptly, and with little care to make the new diet a digestible one. The heavy curd of cow's milk is often difficult of digestion, even by children ten or twelve months old, who have been accustomed only to the breast; and, unless measures be adopted to hinder the firm clotting of the casein, serious dangers may arise. Whatever may have been the cause of the disturbance in the case above narrated, a catarrh of the stomach had been set up, which made the child incapable of digesting cow's milk; and the diet, adopted as a substitute, was one admirably devised for keeping up the derangement. Such a case, which is far from being an uncommon one, is readily treated, however severe may be the vomiting, by restricting the diet to equal parts of weak veal-broth and thin barley-water, given cold in small quantities at a time, by warmth to the belly and extremities, by perfect quiet, and by suitable remedies. The best sedative is liquor arsenicalis—half a drop for the dose—given with a few grains of bicarbonate of soda in some aromatic water. After a few days of such treatment the power of digesting milk usually returns. But at first it should be given sparingly, freely diluted with barley-water, and only once or twice in the day.

Looseness of the bowels is a common consequence of milk-indigestion. The stools are not at first watery; for a time the motions are semi-solid, and have the color and consistence of soft putty. They may have a faint, sour, unpleasant smell, but are not necessarily very offensive. Occasionally, the stools are streaked with green mucus, and sometimes with blood, on account of the straining exercised during their expulsion. This condition of the bowels is accompanied by gradual loss of flesh. The child becomes at first flabby, then obviously wasted. If proper treatment be not resorted to the case becomes one of obstinate, chronic diarrhœa, or else the child, in its weakly state, falls an easy victim to some intercurrent disease.

Such cases, in the early stage—before a regular diarrhœa is established—are often spoken of as cases of "inactive liver," the white stools being supposed to be merely the result of insufficient biliary secretion. Cholagogues are, however, in such cases quite useless. A dose of gray powder produces, perhaps, one dark stool, but afterward the motions are of the same character as before. They are white because they consist of curd mixed with farinaceous matter, which is usually given in large quantities at the same time; and their character can only be improved by a complete change of diet. When a chronic diarrhœa is regularly established, the cases are often called "consumption of the bowels." It is needless to say that they have no relation at all to "consumption," but are a purely functional derangement—a chronic catarrh of the bowels, excited and maintained by undigested food. The *post-mortem* appearances, except for the wasting of all the tissues, differ very little from those of health; but, in long-standing cases, we may find ulceration of the bowels. There is, however, no sign of gray tubercle.

Some years ago I saw, in the country, a little girl, aged fourteen months, who had been losing flesh gradually for two months. Her friends were in a state of great anxiety about her, as her father had died of consumption. The disease had begun with feverish symptoms and relaxed bowels, and the motions had never since been healthy. During the greater part of her illness, she had been fed with milk and sago—the latter in large quantities; but, for a fortnight before my visit, she had taken nothing but pure milk, fresh from the cow. This change in diet had, however, produced no alteration in the symptoms. I found the child very flabby and pale, although, to the eye, not very thin. Her face, when quiet, was placid-looking. She perspired freely about the head and neck. Her fontanelle was of medium size, and not depressed. She had no teeth, and the gums were not at all full. The tongue was rather dry and drab-colored, with a little fur at the back. The abdomen was soft and rather full—not at all tender. The liver and spleen were of natural size, and no enlarged mesenteric glands could be felt. The child had not yet begun to walk when her illness began. Her joints were inclined to be large. The skin generally was harsh, but there was no loss of elasticity. Temperature in rectum, 98°. She had a cough, and a little dry and coarse bubbling rhonchus was heard about the back. The bowels were open four times a day. The motions were large, and of the color of putty and consistence of soft paste, without offensive smell. The child appeared to have no pain, and, although rather fretful, was not very troublesome.

In this case there was evidently a certain amount of rickets present, shown by the profuse sweating of the head; the tendency to enlargement of the joints; the absence of teeth (at fourteen months); and the weakness of the lower extremities. The temperature, which was only 98° in the rectum (at about 3 o'clock P. M.), was almost sufficient, by itself, to exclude the notion of tuberculosis; but, besides this, the absence of any pinched look in the face, and the elasticity of the skin—for, in tuberculosis, the loss of elasticity of the skin is a marked symptom—enabled me to allay the chief anxiety of the mother. The case was evidently one of the class I am describing. The child, owing to little intestinal catarrh, had a very limited power of digesting milk. The treatment was, therefore, obvious. Milk was almost entirely excluded from the diet, and the child was fed, instead, with whey and cream, veal-broth and barley-water, yolk of egg and "Mellin's food," dissolved in barley-water. She took, at first, an alkaline solution of iron, with half a drop of liquor arsenicalis in each dose. This was afterward changed to quinine, dissolved in iron wine and cod-liver oil; and it was not long before the child was convalescent.

In all cases of functional derangement in children the tendency is to recovery, if nature be allowed her way. This is especially true of derangements affecting the alimentary canal. If the irritant, whatever it may be, which is the cause of the disturbance, be removed, the organs quickly resume the normal exercise of their functions. Unfortunately, well-meant efforts to relieve the distress are often themselves the cause of its continuance. The child is weakly and wasting, therefore he requires nourishment; but the utmost care must be exercised in selecting the kind of food to be given. To continue the supply of fermentable material, when the stomach and bowels are already filled with the products of fermentation, is a certain way of hindering the child's restoration to health. If, on the contrary, we cut off the supply of fermentable matter, unless the strength be too much reduced, recovery follows, as a natural consequence. In such cases milk and the ordinary farinaceous foods must, for a time, be withdrawn from the diet. The best substitutes are those which have been mentioned, namely: weak veal-broth and barley-water, in equal proportions; cream and whey, a dessertspoonful to four ounces; yolk of egg (beaten up, in the case of infants, with whey or veal-broth); and "Mellin's food" for infants, dissolved in barley-water, or in equal parts of this and whey. Veal-broth or chicken-broth is better than beef tea, for the latter is often irritating to the digestive organs of young children, especially if there be any diarrhœa.

Sometimes, when cow's milk can not be digested, ass' or goat's milk is more successful; and, sometimes, a child, much reduced by digestive disturbance, dependent upon an unsuitable dietary, at once recovers when put again to the breast. More often, however, milk of any kind seems to act as an irritant poison, and no hope of relief can be entertained until it is excluded from the diet.

Surprising Surgery.

THOSE who are interested in the advance of operative surgery will not fail to be struck by some of the recommendations of the German surgeons. During the proceedings of a congress held in April last, Dr. Zeller, of Berlin, suggested that as a prophylactic measure in operations about the mouth and throat, the trachea should be divided about the third and fourth rings. The lower end should be fastened at one corner of the tranverse incision in the skin, the upper end at the other corner, so that the discharges from the operation-wound may be prevented from obtaining access to the lungs. After the operation the two ends of the divided trachea may be brought together again. That this operation would be attended with danger to the patient, probably few persons would be prepared to deny—perhaps with a danger as great, or greater, than that it is intended to guard against, and we must congratulate Dr. Zeller's dogs on having so well recovered from it. But in ingenuity of suggestion and in boldness of performance, this operation of Dr. Zeller's can not compare with that of Dr. Gluck (Berlin), for this gentleman hopes that, sooner or later, the complete removal of the bladder and prostate—which he has carried out successfully on dogs—may be introduced into surgery. It may, says Dr. Gluck, be performed on men without opening the peritoneum, and the ureters should be fastened to the wound of the abdominal wall; for in dogs the sewing of them into the rectum has not been well borne, and the attachment of them to the cut urethra can scarcely be recommended. We fear that not many surgeons will care to perform it, and not many patients will care to submit to it, when the most favorable result which can be hoped for, has been explained to them.—*Beilage zum Centralblatt fur Chirurgie*, 1881.

A Triumph of Modern Surgery.

At a recent meeting of the Royal Society in London, Dr. MacEwen gave a detailed account of a very remarkable case of the transplantation of bone in the human subject. It is of special interest as being the first instance in which this osseous transfer has been successfully effected. We take the following abstract of Dr. MacEwen's paper from one of our English exchanges:

In 1878 a child of three years was admitted into the Glasgow Infirmary for necrosis of the right humerus, the shaft of which was already separated from its head at the epiphysial junction. Fifteen months after the necrosed portion had been removed, there had been no bone formation of any account, and over two-thirds of the shaft was wanting. A first transplant of bone was then performed. In making the sulcus for the reception of the graft, reliance had to be placed on anatomical relations as to correct position, as there was no trace of periosteum or fibrous structure to indicate the former location of the bone. Portions of human bone were transplanted on three different occasions, the grafts being obtained from patients affected with anterior tibial curves, from whom wedges of bone had to be removed for the purpose of straightening their limbs. These osseous wedges were each divided into many small pieces, which were immediately placed in the sulcus in the boy's arm. These fragments united together as well as adhered to the head of the humerus above and to the condyles below, ultimately forming a solid rod only half an inch shorter than the humerus on the opposite or left side. This transplantation of bone converted a useless arm into a thoroughly useful one. Great stress was laid by the operator upon the subdivision of the transplanted bone into fragments, as thereby greater nourishment is able to be conveyed from the surrounding flesh to the osseous formation. The conclusions arrived at are that transplanted bone is capable of living and growing, and that such transplants are capable of being put to practical uses beneficial to mankind: but that to insure success the transplantation must be conducted antiseptically.—*Boston Journal of Chemistry.*

Baltimore Academy of Medicine—Session of 1880-81.

H. P. C. WILSON, M. D., PRESIDENT.

OOPHORECTOMY.—*Dr. H. P. C. Wilson* reported the removal of both ovaries from a patient æt. 40, on account of profuse metrorrhagia dependent on a fibroid tumor situated in the anterior wall of the uterus (intermural). The patient had been bleeding for twelve years, for the last six or seven of which she had been confined to bed. She also suffered from agonizing dysmenorrhœa. She came under treatment last summer, with excessive anæmia, for which she was sent to Atlantic City, where she improved. On her return, Dr. W. introduced a sea-tangle tent, which expanded in a dumb-bell shape, so that all efforts to get it out failed. In these efforts, the string attached to the tent broke, and also the tent itself on using forceps. Nott's dilator was then introduced, but no dilation of the internal os could be effected, nor could the upper half of the tent be extracted. A larger tent was then used, but this, expanding also in the shape of a dumb-bell, was with the greatest difficulty removed. The broken end of the tent was left in the womb, which was washed out with carbolic acid water. Menstruation returned the next day, and was less in amount than for years. She said that at the close of this menstrual period there was a severe pain, and something passed from her, which she thought was the tent, but Dr. W., who examined all the secretions, did not discover it, and doubted its passage. Oophorectomy was then proposed and accepted. An abdominal incision two and a half inches long was made, through which the left ovary was felt above the brim of the pelvis well over in the iliac fossa. It was enlarged and in a state of cystic degeneration, some of which burst during the operation. Its attachments were transfixed with a carbolized silk ligature, and the ovary cut away without any portion of the Fallopian Tube. The right ovary could not be found until the incision being enlarged to three and a half inches, the whole hand was introduced in search of it, when it was discovered deep in the pelvis, and so bound down that it was with difficulty brought out of the abdominal incision. A double ligature was placed around the ligament of the ovary, embracing also the end of the Fallopian tube. The ovary and Fallopian tube were then cut off, and the stump touched with subsulphate of iron. The abdominal incision was closed with silver wires and carbolized silk ligatures. On the third day the temperature ran up to 103½° and pulse to 130. This was only transient, however, and with this exception they did not exceed 101° and 110. The operation was done the day before that on which menstruation was expected; this was unavoidable, owing to the impatience of the patient and friends. The menses appeared twelve hours after the operation, but were accompanied by very much less pain, and were of much shorter duration than before (for a year previously they had lasted three weeks). At the same time the patient was annoyed with a bad diarrhœa, which was, however, relieved by a hypodermic injection of morphia. Eight days after this the diarrhœa recurred, as the result of an enema of soapsuds and molasses; the stitches gave away, and ℥ij of pus was discharged from the incision (being evidently confined to the abdominal walls). The symptoms have since been all favorable.* One of the most justifiable causes for oophorectomy is the presence of fibroid tumors (except the subperitoneal variety) that can not be removed by operation.

The case is interesting as showing how long foreign bodies may remain in the uterus, without serious injury, and even while a patient is passing through so dangerous an operation as oophorectomy.

FRACTURE OF NECK OF FEMUR WITHOUT THE PATIENT BEING AWARE OF IT.—*Dr. J. Carey Thomas* reported the case of a healthy girl, age fifteen, an inmate of the Children's Aid Society Institution, who, whilst on a visit to her home in the country, slipped on the ice. She immediately got up and walked about as usual. The next day she went to school, but had to limp back home, and could not walk at all after that. A country physician, who was called in, pronounced it a case of rheumatism of the hip. She was then brought to the city, and was seen by himself and Dr. Alan P. Smith, who elicited crepitation in the neck of the femur, and was able, by extending the limb, to overcome the shortening which existed. The case was unusual and interesting in the fact that the girl was not aware of the accident at the time of its occurrence.

DIPHTHERIA AND FILTH.—*Dr. John Morris* reported the occurrence of six cases of diphtheria in one house. Five were attacked on the same day, the sixth four days afterward. All presented a serious aspect from the beginning, and three died on the fourth and fifth days of paralysis of the heart, due to the violence of the poison. The other three are likely to recover. The circumstances suggesting a local cause, an examination was made by the Health Department by direction of Dr. Steuart, Health Commissioner, which revealed a shocking sanitary condition of the premises. The yard was small, the privy being but twelve feet from the hydrant. The contents of the privy were running over into the yard and alley-way. The family cooked and lived in the basement; upon taking up the board floor of this, the ground was found covered with fæcal matter. The cellar was stored with old lumber, much of which was rotten and decaying—the remains, evidently, of some old building intended for use as fuel. A goat was tied near the back door, and there was a large pigeon house, containing twenty to thirty pigeons, and in a filthy condition, just over the door. The family were dirty and offensive-looking, and the odor on entering the house was horrible. A child, who subsequently played with the goat, died of diphtheria. The yellow fever epidemic in Norfolk in 1855 originated from rotten shingles.

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*The tent was subsequently exhibited, having been seven weeks and two days in the uterine cavity. About four months after, the patient is well and the menopause fully established.

FATAL POISONING FROM CARBOLIC ACID.—*Dr. Chew* reported the case of a druggist who took by mistake half an ounce of pure carbolic acid. A stomach pump and emetics were resorted to about a quarter of an hour after the accident, but there was no vomiting. The patient was pulseless and comatose for several hours, then rallied and lived five days. Symptoms of blood-poisoning were present. The patient died from asthenia. The urine (examined on the second day) presented nothing abnormal. Swallowing was possible on the day of death, although accompanied with pain. Three weeks after death the body, which had been placed in a vault, was in a state of complete preservation, without the least odor or sign of decomposition.

RUPTURE OF MEMBRANA TYMPANI BY SLIGHT BLOW ON SIDE OF FACE.—*Dr. Chisolm* reported a case of this nature occurring in a gentleman who received a blow on the ear. Persistent buzzing in the ear, with complete loss of hearing, followed. It was the third case of the accident resulting from slight causes, that had come under his care. In the two others the injury was inflicted in one by a friend closing his hands over the ears of the patient, and in the other by a slight blow on the side of the head with the flat of a shovel.

Dr. Samuel Theobald thought there was probably some abnormality of the membrane in these cases. As a rule, such an accident ought not to produce deafness. Probably an old otitis media had previously existed, which had left the tympanum diseased, and consequently had caused some deafness. An ordinary incision in the membrana tympani will heal in twenty-four hours.

Dr. Chisolm replied that the ear was perfectly healthy before in each case. The ossicles were displaced and perhaps the injury had extended further inward by the foot of the stirrup being driven through the foramen ovale.

Recovery from Laryngeal Diphtheria.—*Dr. D. I. McKew* reported the case of a boy, æt. 15, who began to complain of his throat, fever, etc. In two days this had developed into one of the worst cases of faucial and nasal diphtheria he had ever seen. Shortly after the breathing became difficult. On the third day he was purple from obstruction in the larynx. Death was thought to be certain, and tracheotomy suggested itself, but Dr. M. was deterred from its use by the bad results which he had seen from it. At his visit next morning he was surprised to find great improvement in the breathing. The membrane gradually disappeared and the patient recovered. The case teaches that patients may recover in this affection even in the apparently hopeless cases. If he had been tracheotomized he would certainly have died. He thought if we trusted more to nature and waited longer, we would see more recoveries, and hence we would not have to submit to the bad statistics we now exhibit.

Twin Monstrosity.—*Dr. Wm. Lee* exhibited a specimen of twin fœtuses obtained by Dr. Whitridge from a patient who had aborted at about the third month, probably in consequence of something she had taken. The twins were attached to each other by their sides. One had but one upper and one lower extremity, these parts being deficient on the side of the attachment. This fœtus also exhibited a sac, which occupied the site of junction. Subsequent dissection showed that this sac contained the intestines of that fœtus, which was not fully developed; also that the extent of attachment was one inch and occupied the situation of the false ribs and pelvis.

Lemon Juice in Diphtheria.—*Dr. Steuart* called attention to this article, which he had been using for two years past, in recent cases of diphtheria. He employs it locally, cutting a lemon in two and mopping out the throat with a mop made of muslin. It removes the membrane better than anything he has employed. He continues the use of it as long as there is any membrane apparent, but has rarely had to apply it more than three or four times at most. He has not tried it in any malignant case. Several of his medical friends have tried it with equally satisfactory results.

Coition in Pregnancy.

BY THEOPHILUS PARVIN, M. D.

Popilia, when reminded that pregnant animals did not permit the approaches of the male, frankly replied, "It is because they are brutes."

Undoubtedly abstinence from coition, once the design of this function has been accomplished, is the law of nature. Ought the human race to accept this law as governing its action?

Recent obstetric writers are generally silent upon the question; occasionally some half-bred—borrowing a term from Albany—writing medicine for the mass, sustains the negative, often qualifying the permission to indulge with certain cautions; but upon the whole there seems a tacit consent for the laity to settle the question as, guided by wise reason and kind sympathy on the one hand or by blind instinct and ungoverned passion on the other, they choose, just as my good friend the late Dr. M. B. Wright once said to me, "We must leave these matters to regulate themselves."

Yet our great master, Hippocrates, thought that pregnant women who abstained from coition had easier labors; Galen dwelt upon the liability to abortion from this cause at certain periods of pregnancy, the fruit more easily detached when more tender and when approaching maturity, so that the Christian Fathers had good authority for their injunction of continence in the early part and toward the end of pregnancy.

The older obstetricians of modern times did not think the matter unworthy of or improper for their consideration. Thus Mauriceau forbade intercourse in the first few days following conception and in the last two months of pregnancy. Dionis, the frank, honest fellow, criticised his reasons and condemned his rules, concluding in these words: "I shall add that Mauriceau made his observations from himself, for though married forty-six years, he did not have a single child. For my part, I have a wife who has been pregnant twenty times and has given me twenty children born favorably at term, and I am persuaded the caresses of the husband do no harm." Gardien, whose contribution to obstetric literature is one of the most valuable and interesting of the century, devotes considerable space to the subject, and in the course of his remarks says: "It probably would be more prudent to abstain from using the rights of marriage from the time that pregnancy is certain up to the end of the lying-in."

The fact that abstinence from sexual congress in pregnancy is the common rule of animals is certainly a strong argument in favor of urging similar abstinence on the part of men. In addition it may be truthfully asserted that the pregnant woman has as little desire for coition as pregnant females of lower orders; nay, oftentimes utterly abhors while submitting, for she is less protected by power of escape.

Furthermore, practitioners are sometimes told by innocent husbands—more rarely by wives who so often suffer in silence—that intercourse causes the latter great pain.

Finally, this is a frequent cause of abortion; at least one half of the cases of what is termed spontaneous abortion probably are thus produced. Summing up the arguments* in the affirmative of the question, it may be stated that coition in pregnancy is unnatural; so far as woman is concerned, it is generally odious, often painful; and in regard to the newly-created being, frequently murderous.

What can be alleged on the other side? The peace of families and the chastity of husbands are secured by the indulgence. But suppose men were trained to believe that such indulgence is wrong, injurious to others and to themselves, would their amiability and chastity require to be purchased by a momentary pleasure? Would they not rather learn to subdue and rule this otherwise imperious passion? If Newton, Kant, Fontanelle, and Beethoven could live their many honored years with no indulgence of sexual passion, surely other men might abstain a few months without injury?

This ungoverned passion of man is prolific of evil, and, like producing like, the father who never has learned self-control may give his son not only form and feature, but the germ of the same fierce, clamorous desire, which in its full development will prove a heritage of woe to that son and others. That which polite language veils under the designation *social evil*, and which desolates so many happy homes and brings its quick, black harvest of misery, remorse, disease and death, chiefly lives because man does not know aright, does not duly reverence and honor woman, and keep in subjection that which may become one of the master-passions of his heart, and is thus concontinued from generation to generation.

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*It is highly probable that in many instances both the leucorrhea and nausea and vomiting of the early months of pregnancy are greatly increased by coition. Cases have been observed where the nausea and vomiting did not occur at all, or only in a slight degree, if the husband was absent during the pregnancy; while in other pregnancies, he being at home, these symptoms were most distressing.

Surely prospective motherhood, woman within whom proceeds the evolution of the marvelous mysteries of creation, should be reverenced, is worthy of all kind and thoughtful consideration, and ought to have thrown around her all protective care. The woman who has conceived is *enciente;* that is, ungirdled—in allusion to the ancient custom of laying aside the girdle when pregnant and placing it in the temple of the gods—at once a preparation for the enlargement of the abdomen and a seeking divine protection. Let her not fail of all human care while in this condition. Nature then offers unto man invitation and opportunity to subordinate passion to reason, to conscience, to will, to a higher love, and thus raise himself above himself. A sensual age claims for coition facilitating parturition; and the most sensual of husbands, finding their wives pregnant very much against their wishes and in spite of the devices of conjugal onanism, will claim that they can now indulge freely and without fear, for matters can be no worse.

We do believe that intercourse in pregnancy has nothing to commend, nothing to excuse itself unto wise men, and that virtuous abstinence on the part of the husband will be a blessing both to him and to his wife and to their posterity.

It may be objected that the abstinence here advocated contradicts almost universal practice—a practice that frequently brings no evil. But how do we know it has no injurious results? Admitting that the wife may, in the majority of cases, not patently suffer—have no miscarriage, no pain, no nausea or vomiting increased or excited thereby—is there no violence done to the finer elements of a refined womanly nature? Does such a woman cheerfully accept it as the way of all, like Hiero's wife, who never perceived her husband's offensive breath, imagining that it was common to all men? It seems that there might follow some lessening of mutual love, respect, reverence.

So far as the husband is concerned, he learns no lessons of self control, attains no self-mastery in this regard, and mars that ideal manhood which in better hours and with nobler aspirations he seeks to attain. He will be quite ready in such hours to adopt, as applicable to the act, the concluding clause, while he may reject the first, of the following extract from Sir Thomas Brown's *Religio Medici:* "I could be content that we might procreate like trees, without conjunction, or that there were any way to perpetuate the world without this trivial and vulgar way of coition. It is the foolishest act a wise man commits in all his life, nor is there anything that will more deject his cooled imagination when he shall consider what an unworthy piece of folly he hath committed."

As to the other objection, no matter how universal a practice is, if it be wrong, at least endeavor to point out the wrong. Whether I judge from observation, from the great doctrine of evolution which so fascinates the age, or from the power of divinely revealed truth, the conclusion always is that the world grows better, and that a wiser, higher, happier, nobler generation will one day possess the earth. Each evil pointed out, each wrong discovered, helps the progress to that day, although it may be long before the evil and the wrong cease. Meantime it is a great mistake to accept a popular vote as the criterion of wisdom and right.

Possibly physicians are too reticent in regard to sexual relations, do not consider as fully as they ought the connection of these with human health and happiness, and give that instruction to the people which is so much needed in regard to such relations. Believing this, I can say in the words of Montaigne, "I know very well that few will quarrel with the license of my writings who have not more to quarrel with in the license of their own thoughts."

This may be the voice of one crying in the wilderness, but even in the wilderness many heard. If only truth be uttered, it one day will be heard and heeded by some, and when heard and heeded will multiply itself a thousand-fold.—*American Practitioner.*

Clinical Lecture.

BY JOHN ASHHURST, JR., M. D.,
Professor of Clinical Surgery.

CURE OF HYDROCELE.

Gentlemen: The first case that I have to show you to-day, although no novelty in the clinical amphitheater, is one, at least, that is always of interest.

The patient tells us that, eight or nine months ago, he noticed, on the left side of the scrotum, a swelling, small at first, but gradually increasing in bulk, until now, by its size and weight, it has become a source of great annoyance. Upon examination, I find quite a large tumor; the skin over it thin and almost transparent, with some, though not well marked, enlargement of the superficial veins. The tumor is itself pyriform in shape; in consistency, quite soft and almost fluctuating. I notice, also, that its weight is much less than a mere view of its bulk would lead us to suppose. From what we have already ascertained as to the history of the slow growth of the swelling, as to the symptoms from which the patient suffers, and as to the feel and specific gravity of the tumor, as revealed by palpation, we can at once, without going through with the usual test of transmitted light, proceed with the inference that we have here to deal with a hydrocele, or with hydrocele fluid.

There are two operations to which we can resort in the treatment of hydrocele, namely: the palliative, and the radical. The palliative treatment, which I will employ in the present instance, will, in all probability, be followed by a gradual return of the effusion, until the tumor may equal, or exceed, its present size. By the time that the fluid again accumulates in sufficient quantity to be withdrawn, the patient will, no doubt, be prepared to submit to the radical operation, to be hereafter described.

In proceeding to operate after the palliative method there are two dangers, both of which one must be careful to avoid, namely: injury done to the superficial veins, but, more important still, to the testicle itself, which in this case, as is usual, is situated at the back of the tumor. Seating our patient on the edge of a chair, anæsthetization being unnecessary, we at once, with a direct thrust, plunge a small trocar and canula into the tumor (avoiding the dangers already alluded to), with sufficient force to pass through all the intermediate tissues at once. When the point is felt to be free within the tunica vaginalis, let the end of the instrument fall, and withdraw the trocar. You will observe that, on the withdrawal of the trocar, a clear, amber-colored fluid, characteristic of hydrocele, flows freely into the basin held by an assistant. When all the fluid possible has been evacuated, the canula may be removed, the scrotum being first pinched up around it, in order to prevent the escape of fluid into the tissues. This is done because, if the precaution is neglected, abscesses may thus be formed. Nevertheless, it is very unusual for such accidents to happen; in point of fact, one method of treatment employed, in cases of hydrocele, is to allow the fluid to drain into the scrotum, and there be absorbed. With the application of a small slip of adhesive plaster over the wound, the operation is concluded, and the patient can resume his usual occupation, without either inconvenience or danger.

There is, however, another variety of this affection, the encysted hydrocele or spermatocele, in which a cyst is developed in connection with some part of the testicle itself. A similar method of operative interference is here resorted to (the fluid withdrawn being sometimes milky white, and with spermatozoa present in it), but it must be held in mind that it is not borne so well as in the ordinary form of hydrocele, and greater care is necessary in the after treatment, lest serious inflammatory action be set up within the cyst.

The radical treatment of which we have already spoken, and to which this present operation is preliminary, consists in the withdrawal of the contents of the sac, and the injection of some fluid, preferably the tincture of iodine, into the cyst-cavity. I say "preferably the tincture of iodine," for, although many other injections are used, and that, too, with greater or less success, I have found in my experience that, although not invariably followed by a permanent cure, iodine, of all things, can be the most relied on, when used as advocated by the late

Professor Syme, of Edinburgh, that is, by injecting the undiluted tincture and allowing it to remain. Another mode of treatment sometimes resorted to is the introduction of a seton, which has, however, the disadvantage that it sometimes sets up suppurative, instead of the desired adhesive inflammation.

HOW AND WHEN TO OPEN AN ABSCESS.

The second case that comes before you to-day is one that has just presented himself, and which I will proceed to examine with you. The hand that the patient shows us is inflamed and swollen, and he tells us that for the last six weeks it has been in nearly the same condition. Observe that the whole palmar surface is hardened and indurated, and at one point the skin is dusky, and there is evidence of the presence of pus under it. We have here, in short, a palmar abscess, than which, on account of the inextensibility of the surrounding tissues, few things are more painful. I generally open an abscess of this kind with a sharp, narrow, straight bistoury, which should be introduced with a quick, plunging motion, and then withdrawn toward the operator. Making the incision in this manner, some little pus is seen to escape, and there is slight bleeding only. As to the after treatment, I would advise the application of some simple poultice, such as has already been used by our patient, and the arm should then be put upon a splint, which, if not absolutely necessary, is at least of advantage in the keeping of the part at rest. It was not considered advisable to open an abscess until it becomes what is called "ripe," but we have, I think, exceptions to this rule in palmar and digital abscesses. In them the tension is so extreme, and the danger of the involvement of the neighboring parts so imminent, that both these forms of abscess should at once be opened, otherwise the tendons may become involved and slough, and the bones even being affected, an amputation may be made necessary. The later complication follows oftener the digital than the palmar abscess. It is argued by some that in opening an abscess before it is "ripe," you may open it in one place, while it may subsequently point in another. To wait until the abscess points is in some cases the best rule to adopt, as in the mammary abscess for example; but in the digital and the palmar abscess, an incision, in the majority of cases, is indicated so soon as, or sometimes even before, the presence of pus is detected.

Puerperal Eclampsia Treated With Chloral Hydrate and Morphia.

Being a Report of Six Cases with Remarks.

BY E. P. EASLEY, M. D.

Mr. President and Gentlemen: In December last I had the pleasure of reading a short paper before your society on the treatment of tetanus and puerperal convulsions. I wish now to reiterate and emphasize some of the statements then made, as well as give you my further experience, and the experience of several of the New Albany physicians, with chloral in the treatment of puerperal eclampsia.

Those of you who heard my former paper will remember that I said then that the danger in this disease was in proportion to the violence and continuance of the spasms, and that if we could control these most of our cases would end in recovery; and further, that I relied on chloral to effect this. Now that is my opinion still, and my faith in the efficacy of this agent is greater than ever. It increases with my own experience and with my observation of its results in the hands of other practitioners.

Since I last met with you there have occurred in our city no less than six cases of this frightful malady—two of them resulting fatally. Believing that a brief report of each case would be interesting and instructive, I am led to give you the principal features of each and the treatment pursued.

Case I.—Mrs. D., aged about thirty-five, plethoric, mother of seven children, during her confinement last January was seized with convulsions. She was attended by several of our leading physicians. They gave her chloral per rectum and morphia subcutaneously, but not in large doses. She recovered. But I learn that there is a diversity of opinion among her attendants as to the relative benefits in her case of the chloral and morphia.

Case II.—Mrs. H., aged about thirty-six, plethoric, mother of one child sixteen years old, on the first of the present month, when near the end of her seventh month of gestation, was attacked with convulsions. Her physician, Dr. Bowman, gave her forty-grain doses of chloral in the rectum at short intervals, and also two doses of morphia, one-half grain each, four hours apart. In ten or twelve hours she was perfectly conscious and free from any tendency to spasms. She took thereafter bromide and bitartrate of potassium daily for two weeks, when she gave birth (normally) to a dead fetus.

Case III.—Mrs. G., primipara, aged nineteen, was seized with an eclamptic fit on the 12th of May, 1881. Dr. L. C. Neat, who was called to see her, immediately administered sixty grains of chloral by the rectum, and one-third of a grain of morphia by subcutaneous injection, and repeated the chloral injection in an hour. These measures controlled the spasms for twenty-four hours, when they returned again, and the chloral was once more resorted to. Thirty-six hours subsequently she had a natural labor without any accident to herself or child.

Case IV.—On April 10, 1881, M— A. (colored), primipara, aged eighteen, had a normal labor. Two hours afterward convulsions supervened. She was then given one-fourth of a grain of morphia hypodermically. Six hours later the spasms returned, and the morphia was repeated. The case terminated in death eight hours after the first convulsion.—*Louisville Medical News.*

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Dextro-Quinine Formulary.

The increasing use of dextro-quinine has given rise to many inquiries as to the most efficient methods of prescribing it. We therefore append a number of approved formulæ. We will state that it is easily made into pill form. For this purpose an excellent excipient is honey. In dissolving it for use in solution aromatic sulphuric acid should not be employed except by an expert pharmacist, as the sulphuric acid combines with the dextro quinine, and a granular mass is the result, difficult to work.

The best solvent for dextro-quinine is secured by the use of strong hydrochloric (muriatic) acid. It is readily soluble in this, its solubility being increased by slightly warming the mixture of acid and dextro-quinine. Its solutions being bitter, it is best to suspend them in Quin-Cordial, Elixir of Licorice, Elix. Eucalyptus Comp., or other simple vehicle. The solution mixes readily with protochloride of iron, but is incompatible with sesquichloride of iron and all ferric salts.

IN INTERMITTENT FEVER.

Dextro-Quiniæ,	ʒss.
Syr. Glycyrrhizæ	fl ℥ iv.

Misce.

Sig. For children.—Teaspoonful or more two or three times daily, according to age, in intermittent fever.

FOR REMITTENT AND INTERMITTENT FEVERS.

℞	Dextro-Quiniæ	℥ j.
	Leptandrin,	grs. xx. iv.
	Ext. Nuc. Vomicæ,	aa grs. ij.

M. ft pil No. xxiv.

Sig.—Two every two hours while the skin is cool, between the time of the fever and the expected chill.

FOR WHOOPING COUGH.

℞	Dextro-Quiniæ,	ʒ j.
	Sol Acid Hydrobromic (Fothergill),	f ʒ iss.
	Syr. Zingiberi,	f ℥ iss.
	Aquæ ad,	f ℥ vj.

Misce.

Sig.—A dessert-spoonful four times a day. The dose to be increased according to age.

DR. GROSS' NEURALGIC PILLS.

Dextro-Quiniæ,	ʒ ij.
Morphiæ Sulphatis,	grs. iij.
Strychniæ Sulphatis,	grs. ij.
Acid Arseniosi,	grs. iij.
Ext. Aconiti,	grs. xxx.

M. et div in pil No. lx.

DR. GROSS' NEURALGIC PILL—WITHOUT MORPHIA.

Dextro-Quiniæ,	ʒ ij.
Strychniæ Sulphatis,	grs. ij.
Acid Arseniosi,	grs. iij.
Ext. Aconiti,	grs. xxx.

M. et div in pil No. lx.

FOR LUMBAGO.

℞	Dextro-Quiniæ,	ʒ j.
	Cimicifugin,	
	Camphoræ,	aa grs. xv.
	Ext. Gentianæ,	grs. xxx.

Misce et div in pil No. ix.

Sig.—Two every four hours until fully relieved. Afterward, two or three times daily, until entirely well.

FOR THE NIGHT SWEATS OF PHTHISIS.

℞	Dextro-Quiniæ,	ʒ j.
	Acid Sulph. Dil.,	f ʒ ij
	Syrup Zingiberi.	f ℥ j.
	Aquæ ad.,	f ℥ iv.

Sig.—Dessert-spoonful at night, before going to bed. "Checks night sweats promptly." Dr. R. V. Mattison.

FOR OBSTINATE FACIAL NEURALGIA.

℞	Dextro-Quiniæ,	ʒ j.
	Morphiæ Sulph.,	gr. ijs.

M. ft chart No. vj.

Sig.—One powder three hours before expected attack, and repeated in three hours if necessary. Dr.C.W.Thomas.

FOR INTERMITTENT FACIAL NEURALGIA AND CEPHALALGIA.

℞	Dextro-Quiniæ,	grs. xxx.
	Ammonii Chloridi,	grs. xx.

M. ft chart No. vj.

Sig.—One powder, three times daily, "promptly alleviates the suffering." Dr. W. Matthews.

FOR INTENSE CEPHALALGIA.

℞	Dextro-Quiniæ,	ʒ j.
	Ext. Hyoscyami alc	grs. ij.

M. ft pil No. xij.

Sig.—One pill every three hours, beginning three hours before the expected attack, "gives the most happy results."
Dr. C. O. Dunlap.

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Acute Miliary Tuberculosis is Mistaken for Typhoid Fever.—Senator reports a case (*Berliner Klinische Wochenschrift*) of acute miliary tuberculosis in a man aged 48, who was for three weeks in hospital under his care, in whom the disease was not suspected until the autopsy. The most prominent symptoms were enlargement of the spleen, fever, roseola, and suppurative parotitis, and at the beginning epistaxis and hiccough; upon these symptoms, and absence of those pointing to the lungs, the diagnosis of typhoid fever was made. On post-mortem, there were no appearances of typhoid, but general tuberculosis of both lungs, spleen, liver and kidney, and enlargement of the bronchial glands.

MICROSCOPY.

The Study of Infusoria.*

BY DR. S. O. GLEASON.

INFUSORIA are microscopic creatures, very minute, of almost endless variety, found in infusions of animal or vegetable matter. In their adult or complete form they are furnished with prehensile or locomotive appendages, in the form of cilia, flagella and tentaculæ. They are unicellular, free or sedentary, live in a mucilaginous matrix, single or united in colonies. Food is incepted into a distinct oral aperture, through a limited terminal region, or through the entire surface of the body. They increase by longitudinal or transverse fission, and by external or internal gemmation, preceded by a quiescent or encysted state, resulting in a greater or less number of sporular bodies. The infusorial world, with its countless number of inhabitants—more numerous than the stars, or the sands of the seas, surrounds us upon all sides! They abound in the river, creek, pool, pond and the open sea. Every blade of grass, every flower, the atmosphere we breathe, the food we eat, swarm with them. There is no limit to the diffusion of life where air and moisture exists, fascinating alike the biologist and the young explorer in the study of their forms and habits. Particuarly is this the case since the great improvements that have taken place in our optical instruments, during the last ten years, by means of which the most minute, elementary and beautiful forms of life have been studied.

Siebold, in 1805, expressed an opinion that animalcules consisted of simple cells or vesicles, forming protoplasmic masses, from which all higher organisms were evolved, and that in turn the higher passed into the lower forms. Tracing these minute creatures through their various changes, brings us to the dim, shadowy line (too subtle, too obscure for positive definition) that separates or blends all animal and vegetable life together.

A brief history of the more important epochs of infusorial investigation might be arranged somewhat as follows: The original inventor of the microscope, or the double convex lenses used as such, can not be positively identified. These investigations commenced over two hundred years ago, and we are surprised at the results obtained by those early investigators, with the rude appliances with which they worked. Out of the use of these simple lenses, through long and tedious processes, was evolved the compound microscope. Fontana, of Naples; Drebell, of Germany, and Jansen & Son, of England, have in turn been credited with the invention, which, in its simplest form, attracted public notice about the year 1619. Nearly half a century passed before it was regarded as more than a toy, until Petrus Borelus, an Italian, made some discoveries among the lower forms of animated life. Then came an Englishman, Dr. Robert Hooke, who, in 1665, wrote his famous "Micrographia Illustrata." A few years later the illustrious Dutchman, Antony Van Leeuwenhoek, made extensive scientific researches in the field, and stimulated others to take up the study. His earliest contributions are found in "Philosophical Transactions" for the year 1667. [Examples of this eminent investigator's descriptions of the curious infusoria he had met with were given, the quaint expressions causing much merriment.] Further investigations were made by some Englishmen in 1703, confirmatory of what Leeuwenhoek had discovered with his simple apparatus, twenty-five years before. Next, the names of Sir E. King, John Harris and Stephen Gray are recorded as those of able contributors and investigators in this respect.

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*Abstract of an article read before the Elmira Microscopical Society, February 24th.

The very first illustrations of infusoria are found in a publication of Sir E. King. John Harris gave the first description of *Euglena viridis*, and he made some very shrewd observations on their rapid mode of reproduction.

The Doctor next touched upon the very crude, but ingenious contrivances that early investigators used in making their remarkable discoveries. In 1703 several of the larger species of infusoria were accurately described and figured by Leeuwenhoek, Wilson and others, Wilson claiming to have constructed a lens that magnified 640 diameters. In the earlier half of the eighteenth century contributions to infusorial history were made by Louis Joblot, Henry Baker and Abram Trembly. Joblot in 1718, published a treatise on "Microscopes and Infusoria."

in which his imagination played havoc with existing facts. Henry Baker, in 1742, wrote a book, entitled "Microscope Made Easy," which contributed to the stock of knowledge of infusoria. Trembly described the *Hydra* and *Stentor* with great accuracy about this time. In 1786 Otto Frederick Muller published a work with no less than fifty plates and 367 pages of letter-press, devoted to descriptions of about 300 species.

Gluchen was the first to demonstrate that infusoria assimilated finely triturated carmine. Spallanzani demonstrated the "pulsating vesicle." Up to 1830 all infusoria were classed in two orders; one embracing the rotifers, and the other, the apparently structureless and homogeneous animalcules. In 1838 Ehrenberg published his great work, "History of Infusoria," which surprised the whole scientific world. The treatise contained 532 pages, with an atlas of 64 colored plates of several hundred species. This work to-day remains one of the recognized authorities, and challenges our admiration for the wonderful results obtained by this indefatiguable worker, with the imperfect instruments used in his investigations.

In 1841 Dujardin published his celebrated work, which gave entirely new views of the organization of many groups of infusoria, and corrected some mistakes made by Ehrenberg. He discovered that the Foraminifer possess no distinct organs, that they have a simple gelatinous body, capable of extending fine, thread-like prolongations in every direction, by means of which they adhere to and creep over objects in the water. He described and named the *Diffulgia* and the naked *amœba*, and from their putting forth root-like extensions for locomotive purposes, gave the name of Rhizopoda to this class of creatures. He entered into an investigation of their anatomy, and named the body-substance sarcode. He denied that they had any nervous, muscular or complex digestive system, as taught by Ehrenberg. He found that food was not retained in any permanent stomach-sacs, but passed into the sarcode mass to be expelled anywhere after the nutritive portions had been absorbed.

In 1845 Carl Theodore von Siebold came to the front, asserting the unicellular nature of infusoria. He established the sub-kingdom Protozoa, and divided it into Rhizopoda and Infusoria.

In 1860–61 Max Schultze developed and modified the theories of Siebold. He claimed that in many cases there was no distinct cell-wall, but that the cell was made up of a multiplicity of cells without walls, indistinctly amalgamated with each other. He gave the name protoplasm to the cell that seemed to have no cell-wall. He originated the idea that the cell-contents of all animal and vegetable organisms are made up of a similar protoplasmic basis that is typified in the amœba, as a mere speck of animated, undifferentiated protoplasm.

In 1861 Andrew Pritchard compiled his work, but gave us nothing essentially new. In 1868 Prof. H. James Clark, of this country, discovered a new type of flagellate infusoria, and announced that all sponges consisted of a colonial family of flagellate animalcules. In 1873–75 Dallinger and Drysdale made some splendid investigations with the improved microscopes then in use. The work principally resulted in the discovery of the rapid manner in which flagellate organisms multiplied, and that like forms beget like. In 1876–77 John Tyndall made some important investigations upon the organisms found in impure air and in putrefying substances, showing the vital persistence of putrefactive and infective organisms. This brings the history of infusoria down to the present time.

Microscopic Tests for Poisons.

Prof. Rossbach has just published, in the Vienna *Klinische Wochenschrift*, some remarkable delicate tests for the presence of poisons when they are in too minute quantities to answer to any chemical tests.

As small animals like frogs, mice, etc., are known to be very susceptible to the action of certain of the poisonous alkaloids, so this fact is taken advantage of and very weak solutions introduced into their circulation. Delicate and wonderful as the tests are as applied to frogs, etc., still Prof. Rossbach gives far more delicate ones. A drop of water containing infusoria is placed on a glass slide and examined uncovered. The infusoria are examined carefully as to size, form, color, etc., then a drop of the solution is placed just to the edge of the fluid containing the infusoria. If organic poisons be present the infusoria are instantaneously destroyed, becoming a formless sediment. He startles us with his figures. "If a drop of water containing infusoria and weighing .001 grain be used as a test the quantity of strychnine required to cause remarkable changes will be .00000006 of a grain. In this way $\frac{1}{150000000}$ of a grain of atropine can be detected." Thus, he says, if the stomach of a person poisoned by strychnia contains a *litre* of fluid and only $\frac{3}{4}$ of a grain of the alkaloid, a single drop of this fluid will contain 40 times as much strychnine as is necessary for the test.

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THIN GLASS COVERS.—A microscopist has taken the trouble to measure the thin glass covers purchased at a first-class house, and found that in two ounces but one-third were correct in their thickness $\frac{1}{150}$ to $\frac{1}{200}$ of an inch, two-thirds belonging to a cheaper grade. Only one sixty-eighth were $\frac{1}{200}$ of an inch in thickness, the majority being only fit for opaque objects.

GLEANINGS.

LOCAL TREATMENT IN DIPHTHERIA.—The *British Medical Journal* gives the opinions of a number of leading English practitioners upon the use of remedies locally in diphtheria. Dr. Octavius Sturges has not been able to convince himself of their utility; he believes that the great safety in diphtheria is in early tracheotomy. Dr. Edward Woakes applies the solid nitrate of silver very freely, stirring it into, and if possible under, the exuded mass, completely breaking up the latter so as to reach the diseased surface beneath. In very bad cases he makes this application as often as three times a day. He also uses disinfectant mouth and nose washes, and internally pushes the perchloride of iron to the limit of toleration. Dr. McCall Anderson has great faith in a spray of carbolic acid, 2·3 grs. to the ounce. Dr. Robert Cory employs a spray of sulphurous acid (B. P.) carbolic acid (1 to 60), or permanganate of potash (gr. i to ℥j). Dr. Adler Smith uses repeatedly a dilute carbolic acid steam spray. Dr. Thomas Barlow applies daily the glycerin of carbolic acid. Dr. Prosser James uses lactic acid, both as spray and applied with a brush; he also believes in the utility of frequent inhalations of steam. Dr. Richard Neale finds lactic acid, applied with a brush, unfailing in its speedy action, removing the false membrane and preventing its reformation, a result to which he attaches very great importance. Dr. Burney Yeo mops the throat at the beginning with equal parts of the liquor ferri perchloridi (or carbolic acid) and glycerin, using simultaneously gargles of chlorate or permanganate of potash. Later, when the membrane is more extensive, he employs as a spray ʒss carbolic acid, gr. 80 borax, ℥viii warm water. Dr. Frederick Roberts uses at an early period, to prevent the spread of the membrane, a caustic (nitrate silver stick or solution, hydrochloric acid and water, equal parts, etc.) by means of a brush, efficiently, once for all. To dissolve the membrane, or render it innocuous, he advises inhalations of steam, lactic acid, chlorate of potash, etc. To prevent absorption of putrefying matters, and consequent septicæmia, applications of chlorate of potash with dilute hydrochloric acid, chlorinated soda and carbolic acid, sulphurous acid, or similar agents properly diluted, are applicable. Frequent sucking of pieces of ice often gives great relief. He prefers the spray to other modes of application. Dr. Sydney Ringer has seen good results from the use of carbolic acid and glycerin.

Castration for Dementia from Masturbation.—Dr. N. L. Folsom, of Portsmouth, N. H., writes: "In 1843 Dr. Josiah Crosby, then at Laconia, N. H., and later at Manchester, N. H., (and brother of the late Prof. Dixi Crosby, at Hanover, N. H.) with the assistance of myself and another medical student of his, castrated (with the consent of the patient and his father) an intelligent young man, a school teacher in the country, for approaching dementia from masturbation. The operation completely cured and restored him to usefulness and to society. He had ceased to leave his house, or to mix with any society, and did not wish to see any one. This young man, twenty-two years old, I think, had been medically treated by other persons until his father had given up all hope of recovery for a long time. In my opinion no other treatment, not even the porte caustic (and Dr. Crosby had that instrument), would have saved him from complete dementia. I have looked upon the cure of this young man through my whole professional career, as a wonderful achievement. He became afterwards an active business man, such as a clerk in a postoffice, selling goods, etc., etc. There are thousands of just such cases throughout the land, who, by this treatment and by no other, can be cured, but no one dares to prescribe this and execute it, for fear of his reputation, and possibly a prosecution by some of his nearer relatives, and perhaps by himself, put up to it by some briefless and unprincipled lawyer or meddlesome doctor. Extreme cases of this kind are incurable by any other treatment. I think that superintendents of insane asylums should, by the consent of the man's friends and others, castrate hopeless cases of dementia from masturbation. Other treatment for a reasonable time should be tried.—*Mich. Med. News.*

POST-PARTUM HEMORRHAGE—THOMAS.—Dr. T. G. Thomas, of New York, in concluding a discussion on the subject (*Proceedings Kings Co. Medical Society*) said that in the treatment of post-partum hemorrhage the rule should be this:

If the hemorrhage is slight, and for good reasons you do not wish to pass the hand into the uterine cavity, try the hypodermic use of ergot; apply excessive cold or excessive heat to the fundus, force the uterus into firm contraction under your hand, and never let go of it until the woman stops bleeding. How long shall you hold the uterus? I have repeatedly held it, under such circumstances, for 12 hours.

But suppose it fails and the hemorrhage continues. Then wash the hand and arm thoroughly with soap and water, use a nail brush thoroughly, dip the hand and arm in warm, strong, carbolized water, and, without wiping them, carry the hand up to the fundus uteri, sweep everything out, and keep the hand there until the uterus contracts. Pass the pulp of the fingers up and down the sides of the uterus in any direction, and at the same time make counter-pressure from the outside with the other hand upon the wall of the abdomen.

If you fail with this, what next? It is a bad case, and you may resort to anything which produces a decided shock to the nervous system; give hypodermic of ergot, brandy and ether hypodermically, and lastly, give a fair trial to the Faradic current.

An Exhilarating Mixture.—M. Luton discovered by accident the effects of the following exhilarating mixture. Tincture of ergot of rye, five grammes (gr. 75); solution of phosphate of sodium (10 per cent.), 15 grammes (℥ ss). Mix in a quarter of a glass of sweetened water, and give at one dose on an empty stomach. In very susceptible excitable people, a condition is produced resembling that following the inhalation of nitrous oxide gas; they laugh excessively, feel slight dizziness on attempting to walk; and in many ways suggest alcoholic intoxication. In those who are more sedate and imperturbable, a condition of mild exhilaration merely is induced; the cutaneous circulation is improved, a feeling of buoyancy and cheerfulness develops itself, and lasts for several hours, the patients being agreeably conscious of mental and physical stimulation. The author has verified these observations in so many cases that they must be considered established. He has found different individuals equally susceptible, but has been able to assure himself that there is always some effect. As might be expected, men are less affected than women; in no case has any unpleasant result been observed. The author feels himself justified in recommending his discovery to the profession, although compelled to do so on a purely empirical basis, having arrived at no satisfactory explanation of the action of the mixture. He especially advised its use in cases of melancholia, hysteria, chlorosis, and the various conditions in which languor and depression of spirits are present. The patients to whom he has given it were sufficiently convinced of the efficacy of his prescription to ask for its repetition, assuring him of the benefit they derived from its use.—*N. Y. Med. Jour.*

Perineal Lacerations.—I have not referred to the primary treatment of *perineal lacerations*, that is, their treatment immediately upon the conclusion of the labor during which they have occurred. This subject concerns the obstetrician as much as it does the gynæcologist. On the one hand we have physicians who think the introduction of sutures at this time inadvisable, and on the other hand those who declare that the neglect to do this is reprehensible. The following, is, I think, a fair general statement of the matter: In the great majority of cases sutures introduced with skill immediately after the injury has occurred, keeping the torn surfaces in apposition, will give the woman comfort, and increase the chances of a good union, although of course, it may not take place. In many cases where the sutures are used they are used with such want of skill and in such bungling manner that they fail to insure apposition of the parts, in fact act merely as setons to increase inflammatory action, and, if a good union is obtained, it is not because of the sutures, but in spite of them. In certain cases, owing to the condition of the puerperal woman, it may be bad practice to attempt the primary treatment of the lesion. Such cases are exceptional, however. The "diminution of the chances of the septicæmia" by the closing of ("even slight") perineal wounds, which has been much dwelt upon, of late, would seem to have been much exaggerated.—*Clifton Wing, M. D.*

Poisoned by Postage Stamps.—We hear of a young man belonging in this city who has recently been quite severely poisoned by corrosive sublimate contained in the mucilage upon postage stamps, which he had moistened with his tongue as he stuck them upon some 200 envelopes. The poison had been taken in sufficient quantities to produce violent pains in the abdomen and limbs, and other symptoms of quite an alarming nature. We believe the young man was confined to his bed for some days.—*Keene* (N. H.) *Sentinel.*

Mr. Lister, recently, in a case of fractured patella, laid open the joint with antiseptic precautions, evacuated the extravasated blood, and brought the fractured ends of the patella into apposition by a strong wire suture.

* * *

"The New B. & O. Red Book for Ohio.—This is a pamphlet, of scarlet red color, issued by the *Baltimore and Ohio Railroad*, containing a large amount of valuable political information. It gives the Republican, Democratic and Greenback vote by counties for state officers, 1879 and 1880; the vote for Presidential Electors, 1876 and 1880; also for Congressmen by counties and districts, 1878 and 1880—showing the majorities the years named, gains and losses, and total vote the same years with gains and losses. It is astonishing how much highly interesting

information is crowded into so few pages. Many a time an individual—for a want of the kind is often felt—would willingly pay a dollar for a work like this, yet it is to be had without charge by writing to C. K. Lord, Baltimore, Md. The one for Ohio is a sub-edition. There is a complete work, we believe, for the whole country. The collaborator is Mr. J. G. PANGBORN. We have no doubt all our readers will avail themselves of the opportunity to secure so valuable a work, since it is to be had for the asking.

BOOK NOTICES.

A MANUAL OF HISTOLOGY.—Edited and Prepared by Thomas E. Satterthwaite, M. D., of New York, President of the New York Pathological Society, etc., in Association with Drs. Thos. Dwight, J. Collins Warren, W. F. Whitney, W. H. Porter, and some ten or twelve others. With 198 Illustrations. 8vo. Pp. 478. New York: Wm. Wood & Co. Cincinnati: R. Clarke & Co.

The object of this book, as stated by the editor, is to meet a general demand among the members of the profession for a manual of Histology, summarizing, in concise and plain language, our present knowledge in this fundamental branch of medicine. It is the design to strike a medium course between those works whose brevity on the one hand, and diffuseness on the other, make them unfit for text-books for students, or for works of reference for physicians.

The first two chapters are devoted to a description of the microscope, how to use it, how to select lenses, how to prepare objects for examination, how to stain them, how to preserve them, etc. As is generally the case with works on histology, where an attempt is made to give instruction in regard to using the microscope, or advice in selecting one, and testing the merits of the lenses, etc., it would have been better to have omitted all that is said on this head. A writer like Dr. Satterthwaite has given his attention so entirely to his histological researches, and so little to the microscope itself as a scientific instrument, in which is involved philosophical principles of the highest order, that what he has to say in regard to it is of no value. It is probable he has never looked through any other lenses than three or four belonging to himself, which were made a good many years ago. His ignorance of recent and greatly improved lenses is shown by his stating as a good test of the resolving power of a ten-inch immersion objective the ability to resolve the lines of p. angulatum—a diatom. All microscopists know that a first-class half-inch will easily do it, and that a quarter-inch dry glass that will not do it is a very inferior power. The second quality quarters of all good makers readily do it. Again, he does not seem to be aware that a quarter or fifth of a given angle of aperture, and correctly constructed, may be made to exhibit anything that can be brought into view by a twelfth or higher power of no greater or less angle; and, consequently, with such a lens we can secure any desired amount of amplification by means of the drawtube and deeper eye-pieces. But to give attention to the work as descriptive of histology:

While we do not precisely agree with the editor, that there is felt a want for a text-book of histology for students, unless for the purpose of recording new and important discoveries, yet we regard this work as one of great excellence, which will be greatly in demand by students and physicians. It is written in plain, intelligible language, free from unnecessary verbosity, and, while nothing of importance is omitted, there are avoided discussions in regard to unsettled subjects, and tedious details are shunned. It is a work that one can read right along with a great deal of interest, anxious to be informed of the organization of the various tissues and structures of the body as they are brought to the attention. None the less valuable in consequence, it possesses the power of entertaining to a greater extent than any professional histological work with which we are acquainted. It contrasts strongly, in this respect, with a number we could mention, and yet it is equally instructive.

It is divided into three parts. Part I., containing eight chapters, has been written by the editor. Besides describing the microscope, this part treats of the blood, the epithelium, connective tissue, the teeth, etc. Parts II. and III. have been written bv some ten or twelve other writers, who show a thorough knowledge of the subjects on which they have written, and treat them in a very interesting and intelligent manner.

The work is an exclusively American production, and should be popular with the medical students of this country.

THE APPLIED ANATOMY OF THE NERVOUS SYSTEM.—Being a Study of this Portion of the Human Body from a Standpoint of its General Interest and Practical Utility, Designed for Use as a Text-Book and a Work of Reference. By Ambrose L. Ranney, A. M., M. D., Professor in the Medical Department of the University of the City of New York, etc. With Numerous Illustrations. 8vo. Pp. 500. New York: D. Appleton & Co. Cincinnati: R. Clarke & Co.

This volume comprises a course of lectures delivered before the students of the University of the City of New York, and are, therefore, of a sort of colloquial style.

Very great strides have been made in our knowledge of the nervous system. The anatomy of it is better understood, as, also, is its physiology; consequently we are able to more correctly interpret the symptoms of nervous diseases than formerly. While it is still often difficult to locate precisely what part of the brain is involved in disease, and to define its exact nature, yet so great advance has been made in what we know of the brain, that a great deal of what used to be obscure is now understood.

The work is devoted to the consideration of the anatomy, the physiology, and the symptomatology of the nervous system, as we have it in the brain, spinal cord, the cranial and spinal nerves. These treated together, and fully explained, make it more easy to explain clinical points and elucidate obscurities in localizing affections. We will quote at random from page 347, although it is probable that with a little search we could find many other illustrations better exhibiting the character of the work: "If you will look at the diagram of the spinal cord (see cut in book), you will perceive that the lower portion of the lumbar enlargement is represented as giving origin to the *sciatic nerve;* hence, it is reasonable to expect that a lesion, situated in the lower part of this enlargement, would be manifested by symptoms of an incomplete paraplegia, in which the muscles supplied by the sciatic nerves would be the most affected. Now, this fact seems to be confirmed by clinical experience, since the feet, legs, posterior aspect of the thighs, and the region of the nates are chiefly paralyzed when the lesion is so situated. The bladder is unaffected, but the sphincter ani muscle is often rendered paretic, or it may be entirely paralyzed. The portions of the limbs, which are to become the seat of paralysis, usually exhibit a *sense of numbness* before the effects of the lesion are fully developed, and, in case the posterior columns of the cord be involved, complete anesthesia may also exist in the parts supplied with motor power by the sciatic nerve. The condition of the paralyzed muscles, as to their electrical reactions, and the presence or absence of the evidences of increased reflex excitability, will depend greatly upon how much damage has been done to the gray matter of the lumbar enlargement. If the gray matter be so destroyed as to impair its function, the reflex movements will be absent; and, if the trophic function of the cord be affected by changes in the ganglion cells of the gray matter, the paralyzed muscles will undergo atrophy. The sense of constriction, or "band feeling," will usually be referred, in this lesion, either to the ankle, leg or thigh.

It will thus be perceived that it is the object of the work to elucidate clinical phenomena, as observed in pathological conditions of the nervous system, through the study of its anatomy and physiology. It is in every sense a practical work, although it does not consider the treatment of nervous affections.

A SYSTEM OF SURGERY, THEORETICAL AND PRACTICAL.—In Treatises by Various Authors. Edited by T. Holmes, M. A., Cantab., Surgeon and Lecturer on Surgery at St. George's Hospital, etc. First American, from Second English Edition, Thoroughly Revised and Much Enlarged, by John H. Packard, A. M., M. D., Surgeon to the Episcopal and St. Joseph's Hospitals, Philadelphia. Assisted by a Large Corps of the Most Eminent American Surgeons. In Three Volumes. Vol. I., General Pathology, Morbid Processes, Injuries in General, Complications of Injuries, Injuries of Regions. Large 8vo. Pp. 1007. Philadelphia: Henry C. Lea's Son & Co. Cincinnati: . . . .

The first volume of this very magnificent work on surgery is now ready for distribution to subscribers. The remaining two will follow in a short time.

We do not believe we will at all exaggerate to speak of this work as the most complete and thorough work upon surgery in the English language, emanating as it has, not from one man, but from many men, and the most of these hospital surgeons, and the most eminent of their profession. In consulting it, therefore, the opinions and experiences of the most distinguished surgeons of the world will be learned; for, although they write upon different subjects, yet each one, in discussing the subject allotted to him in a department of science wherein all the subjects composing it dovetail together, necessarily exhibits his mode of thought, type of mind, and manner of viewing the various principles involved, so that it can be conjectured with quite a degree of accuracy how he would view other subjects than those he had written upon. Besides, for instance, when the treatment of various affections is considered, the principles involved being the same in them all, of course the same indications in any disease would be met by the same remedies; and, consequently, when a writer describes his treatment of one affection, he discloses to no little extent what would be his treatment in many others.

The contributors to Vol. I. are John Simon, Dr. J. Burdon Sanderson, Sir James Paget, John Croft, W. S. Savory, Henry Lee, C. H. Moore, H. Arnott, Holmes Coote, Timothy Holmes, Alfred Poland, Geo. W. Callender, Geo. Pollock, J. W. Hulke, Carsten Holthouse, and quite a number of others.

As a work of reference for the practitioner, there is no other work upon surgery its equal. A slight examination makes this evident, for it is seen at once that each subject is treated with a completeness that belongs to a monograph. This has been made possible by having so many writers engaged upon it, nearly every one having had allotted to him the subject of his choice, which, of course, was that with which he was the most familiar, and upon which he was most competent to write. Every point, therefore, in surgery will be found fully treated, and everything known stated in detail. No work having a single author can possibly contain the vast amount of information contained by this "System of Surgery." If differently arranged, it might very properly be termed an Encyclopedia.

The cuts which illustrate the work are numerous and accurate. Several of them are very beautifully colored to nature, and increase the value of the work.

The work is only sold by subscription, and we understand that the demand is very great. To have the work is really to be in possession of a surgical library.

INDIGESTION, BILIOUSNESS AND GOUT IN ITS PROTEAN ASPECTS. Part I. Indigestion and Biliousness. By J. Milner Fothergill, M. D., F. R. C. P., London, Physician to the City of London Hospital for Diseases of the Chest, etc. "What is one man's meat is another man's poison." 12mo. Pp. 320. New York: Wm. Wood & Co. Cincinnati: R. Clarke & Co.

Dr. Fothergill is a well-known writer, and his works are held in high estimation. Quite a number of them have been reprinted in this country, and have been very favorably received.

The writer in this work proposes to treat the subject of indigestion in a scientific manner. After stating that the work is written from a physiological standpoint, he proceeds to say that "the history of normal digestion precedes and introduces the subject of indigestion; first in the alimentary canal, then, secondly, in the liver. By such study the management of indigestion, in its various forms, becomes intelligible. Chaos, 'without form and void,' thus becomes 'dry land and waters.'"

There is no doubt, as the author states, but that indigestion at the present day is greatly on the increase. It has sometimes seemed to us that the large majority of adults suffer at times from some of the disturbances brought about by it. What is the cause, we are not prepared just now to state, although the knowledge of it is probably more or less important in the treatment.

The work has twelve chapters and an appendix. In these chapters natural digestion, as of starch, albuminoids, fat, is considered, and then is treated primary digestion. Having finished these, there follows a description of suitable forms of food, artificial digestive ferments, true nutrition, secondary indigestion—neurosal, reflex, cardiac, toxemic, etc. For a lucid, practical description of the physiology of digestion, we think that of our author's is very satisfactory; and in a thorough knowledge of it depends, undoubtedly, in great part, our knowledge of how to treat the derangements resulting from indigestion.

After considering the various disturbances of the functions of the stomach, the normal processes of the liver are studied, and then are considered the phenomena which proceed from its derangement.

But without entering upon a detailed description of the work—for, although it might be interesting, we have not the space—we will say that the reader will find "Indigestion, Biliousness and Gout in its Protean Aspects" scientifically and lucidly treated—treated in a far more satisfactory manner than is usually the case. Considering to how great an extent these maladies prevail, and how difficult they are to manage—the physician being often put to his wit's end for remedies from which there is any prospect of obtaining relief—a work by so eminent an author as Dr. Fothergill, embodying his very large experience, is certainly worthy attention and study We feel quite sure that if well studied, that the improved treatment, which would result from the increased knowledge of the ailments of digestion, would take away no little of the stigma which has become attached to physicians in consequence of the prevalent notion of their being unable to afford sufferers of dyspepsia any relief.

LECTURES ON THE DIAGNOSIS AND TREATMENT OF DISEASES OF THE CHEST, THROAT AND NASAL CAVITIES.—By E. Fletcher Ingals, A. M., M. D., Lecturer on Diseases of the Throat and Chest in the Rush Medical College, Chicago, etc. With 135 Illustrations. 8vo. Pp. 437. New York: Wm. Wood & Co. Cincinnati: R. Clarke & Co.

We feel quite sure that physicians and students will value this work very highly indeed. It undoubtedly fills a real want, in that it presents a complete exposition of the subject of physical diagnosis, so far as it relates to diseases of the chest, throat and nasal passages; it gives the essential symptoms of each disease; it points out the symptoms and signs which are of most value in a differential diagnosis, and outlines briefly the proper treatment for the various affections.

It is certainly much more satisfactory to have taught in the same work, where they are considered together, the various signs and symptoms of diseases of the lungs, heart and throat, and the mode of detecting them, as disclosed by physical diagnosis, than to be compelled to study them in separate volumes. There are many works on physical diagnosis that are regarded works of value, and are in great demand by students; but the difficulty and inconvenience in studying them can be easily imagined when it is recollected that the principles laid down in them must find their exemplification in another work by another author, who treats of the diseases to which physical diagnosis is applicable.

Prof. Ingals, in the preparation of this work, has availed himself of every source of information at his command, and has overlooked nothing which would be of value to the student or practitioner. It will be found a complete treatise on the subjects of which it treats—treating them in a learned, masterly manner.

Physical diagnosis is set forth in this work more clearly than in any work with which we have ever met.

THE PRESCRIBER'S MEMORANDA.—18mo. Pp. 301. New York: Wm. Wood & Co. Cincinnati: R. Clarke & Co.

This little work is not made up of a vast number of prescriptions with but little reference to classification, as is sometimes the case. On the contrary, the prescriptions are classed under various diseases, the indications of which they are likely to meet. In many instances explanations of the symptoms attend. As an illustration of the scope of the work, under the head of Asthma there are some remarks in regard to the characteristic symptoms of the affection, and then a number of prescriptions follow, as employed by different eminent physicians. On page 31 is one of Dr. Bartholow as follows:

℞	Tinct. Lobeliæ, . . .	℥j.
	Ammon. Iodid., . .	ʒij.
	Ammon. Bromid., .	ʒiij.
	Syr. Tolutan, . .	℥iij.

SIG.—A tea-spoonful every one, two, three or four hours.

"It gives relief in a few minutes, which is often permanent."

Young physicians will often find it of value for reference. We believe the price is about fifty cents.

COULSON ON THE DISEASES OF THE BLADDER AND PROSTATE GLAND.—Sixth Edition. Revised by Walter J. Coulson, F. R. C. S., Surgeon to St. Peter's Hospital for Stone, etc., and Surgeon to the Lock Hospital. 8vo. Pp. 392. New York: Wm. Wood & Co.

This work is one of the numbers of "Wood's Library of Standard Medical Authors" for 1881.

It is a work, the value of which has certainly been well indorsed by the profession, by there having been six editions called for. The subscribers for the *Library* for 1881 will surely obtain far more than the value of their money in this volume. Since the publication of the fifth edition, nearly all of the chapters have been rewritten, and several additions have been made to their number.

All physicians are aware how numerous are cases of diseases of the bladder and prostate gland, and how difficult many of them are to treat. Under such circumstances, a work devoted entirely to their consideration, in which is embodied the whole of the experience of the profession in their treatment, must be regarded as a valuable contribution to medical literature. It is impossible for the ordinary works upon surgery to give even an outline of the information contained in this volume, and which is essential to an intelligent treatment of vesical and prostate affections.

GENERAL MEDICAL CHEMISTRY FOR THE USE OF PRACTITIONERS OF MEDICINE.—By R. A. Witthaus, A. M., M. D., Professor in the University of Vermont, and Professor of Physiological Chemistry in the Medical Department of the University of the City of New York, etc. 8vo. Pp. 443. New York: Wm. Wood & Co. Cincinnati: R. Clarke & Co.

This volume, also, is one of the numbers making up "*Wood's Library of Standard Medical Authors*" for 1881, which we have frequently described.

As the title shows, this work upon chemistry is designed for medical practitioners. Having treated of technical processes, the bearings of chemistry upon physiology, hygiene, therapeutics and toxicology are fully set forth.

As the work is by a well-known American chemist, himself a physician, it will receive a cordial reception, and become a standard work. "Wood's Library" is fortunate in having it in its series. It is printed in solid brevier type, easily read. If printed in the same size type that medical books usually are, it would contain over 600 pages.

EDITORIAL.

PARTIES who advertise will consult their interests by advertising in a well-established journal—not one just commenced, nor one that has lived out its day of usefulness and is kept alive by occasionally buying up the subscription list of a defunct contemporary. It is better to pay a reasonable sum for space in a journal of large *bona fide* circulation than a very small sum in a journal of scarcely any circulation.

THE MEDICAL NEWS is the cheapest medical journal to advertise in of any medical journal in the West—not because it charges less per page, but because it has the largest circulation. Those who advertise in it usually continue their advertisements so long as they continue to advertise in any journal. In looking over the advertising form it will be observed that not a few of the advertisements have been appearing for years.

We hereby append the post-office law in regard to periodical publications. By noticing it, and keeping it in mind, hard feelings would sometimes be avoided:

UNITED STATES POSTAL LAW.—1. A postmaster is required to give notice *by letter* (returning a paper does not answer the law) when a subscriber does not take his paper out of the office, and state the reasons for its not being taken. Any neglect to do so makes the postmaster *responsible* to the publishers for payment.

2. Any person who takes a paper from the post-office, whether directed to his name or another, or whether he has subscribed or not, is responsible for the pay.

3. If a person orders his paper discontinued, he must pay all arrearages, or the publisher may continue to send it until the payment is made, and collect the whole amount, *whether it be taken from the office or not.* There can be no legal discontinuance until the payment is made.

4. If the subscriber orders his paper to be stopped at a certain time, and the publisher continues to send, the subscriber is bound to pay for it *if he takes it out of the post-office.* The law proceeds upon the fact that a man must pay for what he uses.

5. The courts have decided that refusing to take a newspaper and periodicals from the post-office, or removing and leaving them uncalled for, is *prima facie* evidence of intentional fraud.

DEATH OF PRESIDENT GARFIELD.—Before receiving this number of the MEDICAL NEWS our readers will have learned of the decease of the President of the United States, an event which has brought the greatest grief upon the whole country. And not only do the people of this great nation lament the untimely end of the chief magistrate, but those of every civilized government of the world are affected with the deepest sympathy. Immediately upon the flashing of the news from country to country that the President had died, the hearts of all the nations throbbed with sorrow. Even far away Turkey was moved, and despotic Russia has sent us words of condolence. So soon as sufficient time has elapsed to hear from them, there is reason to believe that we will learn of expressions of pity from even the barbarous people who are not savage, as those of Japan, China and others.

If it were possible for anything to ameliorate the great calamity our country has received in the cutting off of the chief magistrate by the hand of a miserable assassin, almost just as he had assumed the helm of state, it would be this sublime exhibition of humanity which has been witnessed as the result. Never before has there been such an opportunity for its display and proof its existence. There has been before murders of rulers, and expressions of sympathy passed between nations in consequence of bereavements following. But in no instance has an event ever occurred calling forth the higher feelings of the heart of the people of all the civilized nations of the world, and attended with so sublime a manifestation of them—proving that there is in man a humanity for man, and a feeling of brotherhood for his fellow-creature existing everywhere.

There is, undoubtedly, a vast amount of sin and selfishness existing in the human heart, and often displays of sickening inhumanity are seen in men; yet now and then there loom up signs of virtue, proving that there is a substratum of goodness in human nature, and that not everything in man is corrupt.

While the President was suffering from the wound inflicted by the assassin, Guiteau, physicians, as other citizens, were exceedingly anxious for his recovery, studying the symptoms, so far as disclosed by the bulletins, with intense eagerness—often hoping he would recover when the surgeons gave encouragement, yet wondering how he could, when they observed the constant frequency of the pulse, never numbering less than 98 pulsations a minute, oftener 100, 102 and 104, and not unfrequently reaching 110, 115, 120 and 130, with fever every day from the beginning. We never knew a patient to gain strength under such circumstances,* although he might live a long time, feeding on his own tissues if he had a good deal to spare.

We have all confidence in the skillful management of the case by the distinguished medical gentlemen who had the President in charge. There are no more competent surgeons in the world than Drs. Hamilton, Agnew, Woodward, Barnes, etc. It sometimes seemed to us that the probe was too frequently made use of, exposing the patient to unnecessary irritation, and interfering with any healing processes, if the probe had been passed along the channel made by the ball, which turned out not to have been the case.

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*It was often announced in the bulletins that the President was gaining strength.

As all our readers may not have had an opportunity of seeing it, and that it may be convenient for reference to all, we append an account of the autopsy. We think it will be the general conclusion that a fatal result of the wound was inevitable.

AUTOPSY.

By previous arrangement the post mortem examination of the body of President Garfield was made this afternoon, September 20th, in the presence and with the assistance of Drs. Hamilton, Agnew, Bliss, Barnes, Woodward, Reyburn, Andrew H. Smith, of Elberon, and Acting Assistant Surgeon D. S. Lamb, of the Army Medical Museum, Washington. The operation was performed by Dr. Lamb. It was found that the ball, after fracturing the right eleventh rib, had passed through the spinal column, in front of the spinal canal, fracturing the body of the first lumbar vertebræ, driving a number of small fragments of bone into the adjacent soft parts, and lodging just below the pancreas, about two inches and a half to the left of the spine and behind the peritoneum, where it had become completely encysted. The immediate cause of death was secondary hemorrhage from one of the mesenteric arteries adjoining the track of the ball, the blood rupturing the peritoneum, and nearly a pint escaping into the abdominal cavity. This hemorrhage is believed to have been the cause of the severe pain in the lower part of the chest complained of just before death. An abscess cavity, six inches by four in dimensions, was found in the vicinity of the gall bladder, between the liver and the transverse colon, which were strongly inter-adherent. It did not involve the substance of the liver, and no communication was found between it and the wound. A long, suppurating channel extended from the external wound between the loin muscles and the right kidney, almost to the right groin. The channel, now known to be due to the burrowing of the pus from the wound, was supposed during life to have been the track of the ball. On examination of the organs of the chest, evidences of severe bronchitis were found on both sides, with bronchial pneumonia of the lower portions of the right lung and, though to much less extent, of the left. The lungs contained no abscesses and the heart no clots. The liver was enlarged and fatty, but free from abscesses, nor were any found in any other organ except the left kidney, which contained near its surface a small abscess about one-third of an inch in diameter. In reviewing the history of the case in connection with the autopsy, it is quite evident that the different suppurating surfaces, and especially the fractured, spongy tissue of the vertebræ, furnish sufficient explanation of septic condition which existed.

[Signed] D. W. Bliss, J. K. Barnes,
J. J. Woodward, Robt. Reyburn,
Frank H. Hamilton, D. Hayes Agnew,
Andrew H. Smith. D. S. Lamb.

After the autopsy, Dr. Hamilton made some statements of facts to a *Tribune* reporter, from which we make a few selections:

The blood sac was behind the peritoneum, but the autopsy revealed that it had ruptured into the cavity of the peritoneum, probably just before the occurrence of death, and at least a pint of blood, coagulated, was found in the peritoneal cavity. The abscess spoken of in the official report of the autopsy was not in this region precisely, but somewhat more to the right, between the liver and transverse colon. No connection was discovered between this and the external wound made by the bullet, and there are no means of knowing whether it communicated with the original track at some earlier period in the history of the case or not.

It may have done so, and become subsequently closed, or it may have been the result of the extension of inflammation from the original track to the adjacent tissues. There was no lesion of the liver, recent or ancient, indicated in the autopsy.

It is evident from this account that the presence of the ball in the situation in which it was found was not the immediate cause of death, as it was completely encysted, and must have long since ceased to cause irritation. The small fragments of bone and the great lesion of the lumbar vertebra are the pathological facts which alone could endanger the patient's life. This lesion of the vertebra the surgeons had no means of repairing, nor could it have been repaired, save by the processes of nature.

The small fragments of bone, widely disseminated in the adjacent tissues, certainly could not have been removed by any surgical operation.

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There were no possible means of knowing the situation of the ball during life, as it gave no indication of its presence, nor could it possibly have been reached and recognized by any form of surgical probe. That death would have been the immediate and the inevitable result of any attempt at removing the ball is almost absolutely certain.

However much we individually or collectively may have made ourselves liable to just criticism in the matter of the diagnosis or prognosis, and whatever doubts may be entertained by medical men as to the propriety of the treatment in certain respects, I can not believe that one intelligent surgeon will hereafter think that at any period in the progress of the case the ball or the fragments of bone which it sent before it could have been successfully removed, nor, indeed, that any serious attempt in that direction would not have resulted in speedy death. Viewing the case in the light of our present knowledge, I am prepared to affirm that surgery has no resources by which the fatal result could have been averted. This was the sad consolation which I felt justified in giving to the grief-stricken wife and family, and which all my associates believe they can give to an afflicted people.

Question of the Autopsy.—Since the above has been in type we have come across the following:

Dr. Schrady, upon invitation of the consulting surgeons of the late President, visited the Army Medical Museum to-day, for the purpose of examining the anatomical specimens preserved after the autopsy. These consist of the fractured vertebra, the broken eleventh rib, and all the organs affected by the wound. The vertebra has been cleaned carefully, and will be mounted and preserved, as was that of Wilkes Booth. The viscera is preserved in alcohol. Dr. Schrady was accompanied by Prof. Weisz, of the University of New York, whose pistol practice on cadavers in July last, for the purpose of discovering the probable course of the ball, attracted so much attention.

They were invited to inspect the drawings which are being made to accompany the detailed statement of the autopsy, which will be published and signed by all the surgeons. This report is the work of Dr. Woodward, U. S. A. Careful comparisons and verifications of the statement of the record and its drawings with the viscera and injured bones were made in order that there shall be an opportunity of intelligent discussion and to prevent all captious criticism.

The viscera was found to be perfectly preserved, and was in as good condition of dissection as when first taken from the body. The lungs, liver, kidneys, pancreas, gall bladder and colon are there, and show the effects of the injuries from the passage of the ball, the suppuration surfaces, the abscesses, the pus gatherings, and ruptured mesenteric artery. The most interesting specimen was the encysted bed of the ball, into which the ball was fitted to-day.

The conclusions of Dr. Schrody and Prof. Weisz are that great skill and care have been displayed in the preservation of the parts, and that the statements of the bulletins publishing the first accounts of the autopsy were absolutely correct, and that nothing has been concealed.

Dr. Schrody and Prof. Weisz were among those outside surgeons who believed that the President would recover, the opinion, of course, being founded upon the diagnoisis of the case as it existed before the revelation of the autopsy. They now think that there never was a chance of recovery, and that the fact that the patient survived for eighty days is astonishing in a medical point of view.

The statement to be published here alluded to is not the full official history of the case, but relates only to the autopsy. The former will not be ready before December, and will be published by the Surgeon General's Department of the army.

Remarkable Results of Experiments Upon the Brains of Animals.—Our readers are aware that the International Medical Congress is in session at this time in London. It seems that the meeting is a great success. Medical men are present from every part of the globe.

The *Lancet*, which is published weekly, and whose pages are almost quarto size, devotes a large portion of the space of each of its numbers to the publication of the discussions. In its issue of August 20, it prints Professors Goltz's and Ferrier's accounts of the results of their cutting away the greater parts of the cerebra of animals. It seems that the results respectively varied very greatly, indeed to an extent difficult to altogether explain.

Prof. Goltz stated that he commenced experiments six years ago, in which he sought to determine what degree of truth attached to the assertion of Flourens, that large parts of the brain of living animals may be removed without there resulting any apparent loss of cerebral function. He explained his method as consisting of exposing the surface of the brain, and then washing away large portions of its substance by subjecting it to the action of a powerful stream of water. It was found that the statement of Flourens could not be accepted without reservation. After the destruction in the way indicated of large parts of one side of the brain, there results, for instance, hemiplegia, which is, however, not permanent but transient, with cross blindness. After destruction of large parts of both hemispheres by the same method, Goltz found that there was produced a permanent affection of the senses, which were observed to be dulled to an extraordinary degree, without being, however, lost. During the last two years, Prof. Goltz, abandoning his earlier "washing-away" method, has destroyed limited parts of the cerebral surface by means of circular drills with cutting and tearing edges, which, when rapidly rotated, destroy the part of the brain in which they are placed. By removing large parts of the skull cap, and using such instruments, Prof. Goltz has produced either very localized or very extensive lesions, of which he has studied the results; the dog being invariably the animal chosen for experiment. The results differed according as the anterior or posterior halves of the upper surface of the convolutions were destroyed. Without referring in detail to various experiments of Prof. Goltz's, we have to draw special attention to his remarkable assertion that in the dog, after removal by his procedure of the greater part of the grey matter of the hemispheres, of the motor areas, and of the sensory areas, the animal may recover and live for long periods of time, without exhibiting any definite paralysis whatever. Such a dog, according to Prof. Goltz, can see, taste, smell, feel, yet all these senses are dulled. It can move, yet its movements are clumsy. It has none of the paralysis of movement, and none of the losses of special senses, which the doctrines of Ferrier and of Munk would lead us to predict. Though the animal is not stone blind, and can see, hear, and feel in a certain manner, yet perception is greatly interfered with and the intellectual functions are weakened. The dog is in a condition of one demented, and many of its instincts are found to be perverted.

Prof. Goltz having sat down, Prof. Ferrier succeeded him. He said that until it is proved that the phenomena observed by Prof. Goltz are dependent upon the grey matter of the hemispheres, it may be assumed that they are phenomena which require, in the case of the dog, merely the integrity of the great basal ganglion. He called the attention of the section to the fact that Prof. Goltz's experiments had been performed entirely on dogs, and he deprecated the drawing of general conclusions from the experiments performed upon one animal species. Without disputing the facts described by Prof. Goltz, he would bring before the section other facts observed by himself in the case of the monkey, and which entirely corroborated his own views in reference to cerebral localization. Prof. Ferrier pointed out that by Prof. Goltz's method a simple and definite lesion could not be established. During the last two years, however, he, in association with Prof. Gerald Yeo, had employed the galvanocautery for the establishment of perfectly definite lesions, and by using the antiseptic method of treating the wound had succeeded in eliminating all chances of inflammation and obtaining a perfect recovery from the actual operative procedure in almost every case. He had thus been able to meet the objections which had been advanced to his earlier experiments—to wit, that he studied for too short a time the effects of the lesions produced, and he had been able to observe that definite lesions of localized regions of the surface of the monkey's brain led to definite and persistent paralysis of motion or losses of special senses. Prof. Ferrier then referred in detail to several of his experiments on monkeys, pointing out that in two of the cases where injuries of motor areas had been inflicted, not only was there no recovery, but that when, some months afterward, post-mortem examinations were made, there were found descending degenerations affecting the crus cerebri, the pons, and the spinal cord. In a case where a lesion was inflicted upon both occipital lobes and angular gyri, affecting the supposed centers for vision, there had resulted no paralysis of motion, no loss of smell or hearing or taste, but the animal became stone blind; its pupils became widely dilated and fixed, and atrophy of the optic nerve ensued.

The interests attaching to the discussion on localization was greatly enhanced by the fact that whilst Prof. Goltz had brought one of his dogs from Strasburg, Prof. Ferrier was willing to exhibit two monkeys which he had operated upon some months previously, and in one of which he had procured definite motor paralysis and in the other permanent and absolute deafness. On the afternoon of Thursday the section, joined by such visitors as Profs. Charcot and Virchow, adjourned to the Physiological Laboratory of King's College. They had the opportunity of examining the dog in which Prof. Goltz asserted that he had removed the greater part of both hemispheres, including all the supposed motor and sensory areas. That the operative procedures to which the animal had been subjected had been extensive was quite obvious from an examination of its skull, large gaps in the continuity of the upper and external walls of which were felt. Saving some clumsiness in its movements, this dog exhibited singularly little which would distinguish it from the normal; it appeared possessed of considerable intelligence, and certainly did not suggest to the onlookers that it was a dog demented. In startling contrast to the dog were two monkeys exhibited by Prof. Ferrier. One of them had been operated upon in the middle of January, the left motor area having been destroyed. There had resulted from the operation right-sided hemiplegia, with conjugate deviation of eyes and of head. Facial paralysis was at first well marked, but ceased after a fortnight. From the first there had been paralysis of the right leg, though the animal was able to lift it up. The arm it had never been able to use. Lately, rigidity of the muscles of the paralyzed limbs had been coming on. The other monkey, as a consequence of paralysis of its auditory centers, was apparently entirely unaffected by loud noises, as by the firing of percussion caps in close proximity to its head.

What conclusions, it will be asked, are to be drawn from these singularly discordant experiments of Prof. Goltz and Ferrier? As a result of their statements and their demonstrations, are we merely to conclude that the brain of the monkey is constituted differently from that of the dog, and that experiments performed upon the brain of one animal throw no light upon the functions of the brain of the other? Until we know the exact conditions of the experiments in the two cases, it will be impossible to analyze the results obtained, which may be explicable rather by the extent or depth of the lesions inflicted in the two cases than by the hypothesis of a different anatomical conformation. Fortunately the two eminent experimenters, whose graphic accounts of their work had been listened to with marked interest by the section, determined upon a line of conduct destined to throw great light upon their experimental procedures. On one of the days following the discussion and demonstration on cerebral localization Prof. Goltz's dog and Prof. Ferrier's monkey with motor paralysis was deeply anæsthetized, and then killed. The brains were removed, and were handed to a committee composed of Drs. Klein, Langley, Purser, and Schafer, who have been requested to make an elaborate anatomical and histological examination, with a view to localizing the extent of the lesions inflicted by the experimenters. It may be remarked, however, that when the brains which had been removed from the two animals were exhibited in the Physiological Section, it appeared to the onlookers that the lesions in Prof. Ferrier's case exactly corresponded to that which he had predicted; whilst, unquestionably, in Prof. Goltz's experiment the experimenter had failed in removing considerable portions of the grey matter of the convolutions, including parts at least held by Ferrier to be the seat of motor centers.

LISTERISM.—It is remarkable that an operation which is nothing more than the simple application of a scientific fact to surgical practice, should be called by a man's name. But such seems to be the case; and the operation, we presume, will continue to bear the name that has become attached to it, although the gentleman to whom it belongs had nothing to do with the discovery of the principle involved.

Pasteur, as all know, has demonstrated that putrefaction can not take place, except by the presence of bacteral germs floating in the air. It is a fermentation analogous to that which takes place in sugar, owing to the presence of the yeast plant. In the present number of the MEDICAL NEWS there is an article by Prof. Taylor, of Washington, in which it is shown that it is through bacteriæ that organic bodies of all kinds are reduced to their original chemical elements. Consequently, without these microscopic germs, there would not be that process of "earth to earth and dust to dust," for, although life had departed from an organic body, its organization would still continue. It will be seen, consequently, to digress a little, that these most minute beings play a most important part in nature by their mere presence--exciting those great chemical forces into activity, which are all the time in action, and are necessary for so many great purposes, and yet do not themselves enter into the chemical process.

But to proceed to the subject of *Listerism* after these prefatory remarks: The design of the method is to destroy any germs that may be in contact with a wound, or the body upon which a wound is to be made, absolutely to prevent the deposit of these organisms during the operation, and to exclude them during the process of repair.

"This is secured by performing every step of the operation under a spray, from an atomizer, of a solution of carbolic acid, and by dressing the wound resulting with carbolized dressings—chief among which is the carbolized gauze—in such a manner as to prevent the entrance of the microgerms. These, with perfect drainage, are the objects aimed at by the Listerian method." In his improved method, Prof. Lister employs two solutions of carbolic acid: one a five per cent., or one-twenty solution; and the other a two and a half per cent., or one-forty solution.

We are told that all the instruments, needles and sponges to be used in a surgical operation are immersed in the one-twenty solution. The atomizer is put into operation so as to throw a spray of the one-twenty solution over the site of the operation—the patient is then anesthetized—an attendant hands the surgeon a basin of the one-twenty, with which he sprays the surface of the thigh, and from the same lotion he wrings two towels to encircle the limb above and below the seat of the operation.

The surgeon and his assistants cleanse their hands in the one-twenty. As the operation proceeds, the sponges are cleansed in the one-forty solution, being wrung out and used; or, if several be needed, a supply may be kept on the towels encircling the limb.

Bleeding vessels are secured by carbolized catgut, and cut short. Perfect drainage is a cardinal feature of the antiseptic system.

Now, all this proceeding is to destroy any microscopic germs that may come in contact with the wound, in consequence of its exposure to the air. It is a well-known fact that wounds that take place inside of the integuments, recover much more rapidly than exposed wounds. Take, for instance, a simple fracture. Here occur severe contusions and laceration of the soft parts, and blood and serum are effused in addition to the breaking of the osseous structure, but owing to the unbroken integument, recovery takes place without constitutional disturbance—the blood is absorbed, the mangled tissues are either absorbed or united by the healing process, and recovery is similar, if not identical, to that which takes place in healing of incised wounds by first intention. There is no serious inflammation, no formation of pus, no blood poisoning.

How different is the case when there is a laceration of the integument and the fracture compound! Here all the conditions may be identical with those in the first case cited, with the single exception of a slight rent of the skin covering the part. No one having had experience in treating a compound fracture, needs to be reminded of the long and tedious recovery, the profuse suppuration, the exhaustion, tending to hectic, the dangers of blood poisoning, and the too frequently unsatisfactory recovery, if recovery takes place at all, that rewards the surgeon's best endeavor—and all because of a single tear in the integumentary structure covering the seat of fracture.

Evidently the air, or something contained in it, has a very noxious influence upon wounds. But there is reason to believe that the air itself is innocuous, and that the deleterious effects which follow the exposure of wounds, come from the bacteral germs contained in the atmosphere, which promotes the putrefaction of fluids and tissues of wounds, with the long train of evils that necessarily result therefrom.

By means of *Listerism* the bacteral germs are gotten rid of; and the wound afforded, in consequence, the same opportunities of recovery as wounds that have occurred within the integuments.

We have recently received a pamphlet made up of an essay on "Antiseptic Surgery," read before the Luzerne County Medical Society, by Geo. W. Guthrie, M. D., of Wilkes Barre, Pa. To this we are immediately indebted for the facts we have presented in regard to *Listerism*, which the author himself seems to have gleaned from Holmes' System of Surgery. While he seems to have much confidence in Listerism himself, yet he quotes from a number of surgeons who seem to be of the impression, that operations will succeed about as well if strict cleanliness be observed under all of the circumstances, as they would when every minute detail directed by Mr. Lister is carefully carried out. An exception to this, however, Dr. Guthrie thinks should be in cases of ovariotomy, and in regard to it he quotes Sir James Paget, who says: "But there are some groups of cases, in which I believe it would be absolutely wrong to dispense with any of the precautions of the complete *antiseptic surgery*." Paget also includes all abdominal sections, osteotomy, and cutting into healthy joints.

We learn from the pamphlet that Sir Paget has written thus: "A few years ago, I believed that I had never seen a patient recover after the opening of a psoas, or lumbar abscess with a free incision. I could not remember one who had not died before the opened abscess healed. Of late years, I have known such abscesses opened with complete impunity under antiseptic treatment, and there has seemed nothing but this treatment to account for the difference of results."

Mr. MacNamara has given his experience with the treatment in a large Calcutta hospital where, in spite of the most careful dressings, it was almost impossible to preserve patients from pyemia. The adoption of Listerism was followed by "the very best results."

Dr. Guthrie, in summing up his essay, remarks as follows: "This, it seems to me, is the crowning glory of Listerism. When every nook, and crevice, and cranny of the hospital ward is a nidus for the germs of disease, where the pestilence that walketh in darkness and the destruction that wasteth by noonday, meets the surgeon wherever he turns—it is then that the antiseptic method is a strong tower and a rock of defense to both the surgeon and his patient, enabling them successfully to conquer an invisible and terrible enemy."

The discovery of the effects of bacteral germs upon wounds, whether made by the surgeon or the result of accident, we think should rank among the greatest discoveries. Surgery has been greatly advanced by it.

EXHIBITION OF MICROSCOPES.—At the recent meeting of the *American Association for the Advancement of Science*, held in Cincinnati, there was quite a display of microscopes, as we have before intimated—R. & J. Beck, of London and Philadelphia, Messrs. Bausch & Lomb, of Rochester, N. Y., W. H. Bulloch, of Chicago, and several other manufacturers exhibiting. Dr. J. A. Thacker, of Cincinnati, made an exhibition of his private collection of stands, lenses and accessories generally. He has, probably, the largest collection of any private individual in the country. He has among other things fifty or sixty lenses, made for him by the most eminent makers of this country and Europe.

The palm, undoubtedly, belongs to R. & J. Beck of manufacturing the best and greatest variety of microscopes. Their *International*, undoubtedly, can not be excelled in its adaptation for all the purposes which the professional microscopist may need for the widest range of investigation. All improvements which the experience of microscopists to the present time have suggested are combined in it. We have not space to give a detailed description of it. Suffice it to say that it is a grand instrument, not excelled by any made by any manufacturer in the world. The price of it, binocular, without any objectives, or other accessory apparatus except several eyepieces, is $325. Any one seeing it, and witnessing its beautiful appearance and splendid finish, and perfect adaptation to all its purposes, can not help but regard it as very cheap at this price.

But Messrs. R. & J. Beck make a number of other instruments at a much less price, suitable for all the purposes of scientific investigation. Among them is the "Smaller International," which, like the large one, may be had either binocular or monocular; the "Ideal;" the "Popular;' the "Economic," of which there are a number of varieties; the "New National;" the "Histological." The price of the last mentioned, magnifying between 200 and 300 diameters, is only $25. With a one inch objective added, a quarter inch belonging to it, the price is $32, and thus fitted out it will be found a very serviceable instrument. But one of the varieties of the Economic, which range in price from $40 to $85, will be found much superior. The Economics exceed any microscopes for cheapness and efficiency with which we have any knowledge. The cheapest form, at $40, is competent for a wide range of work. Indeed, we can scarcely call to mind any investigations a physician might wish to make, he could not accomplish with it. It is supplied with an inch and a quarter inch objectives, of the same quality as the other varieties of the Economics, and as also are the "Ideal" and "New National," and, like them, higher powers, as an eighth or fifteenth, for its fine adjustment is very delicate, can be added at any time—the first costing $20, the other $30. The quarter inch lens easily resolves p. angulatum, which, only a few years ago, was regarded as a difficult test for the finest lenses.

But we must wait until another time to describe further Beck's various microscopes, and the various classes of objectives made by them.

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SAN FRANCISCO, CAL., Sept. 13th, 1878.

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Gentlemen—I have used Kidder's Saccharated Pepsine in my own family with the most satisfactory results, and consider it one of the best preparations of the kind manufactured. Yours, etc.,

JAMES G. STEELE, *Chemist.*

SAN FRANCISCO, CAL., July 1st, 1878.

KIDDER & LAIRD:

Gentlemen—We find it very satisfactory, and will always purchase your brand hereafter. Yours, etc.,

LAFORE & KAHN.

CONNECTICUT.

BRIDGEPORT, CONN., July 15th, 1878.

KIDDER & LAIRD:

Gentlemen—The physicians have used it in prescriptions, and think it a valuable preparation, and as good as they ever saw, and will give it the preference in their practice. I have been using Hawley's for the last five or six years. Yours, etc.,

W. & E. SHELTON.

WILLINGTON, CONN., Sept. 29th, 1877.

KIDDER & LAIRD:

Gents—Your elegant preparation of Pepsine has been received. I think it superior to any that I have ever used in my practice. Yours, etc.,

W. L. KELSEY, M. D.

ILLINOIS.

EDGEWOOD, ILL., July 11th, 1878.

KIDDER & LAIRD:

Gentlemen—I find Kidder's Saccharated Pepsine a fine article and very effective in conjunction with other treatments in cases of cholera infantum; would recommend it highly in such cases. Yours, etc.,

JOSEPH HALL, M. D.

MILLSTADT, ILL., June 25th, 1878.

KIDDER & LAIRD:

Gentlemen—I have adopted the use of Kidder's Saccharated Pepsine in preference to any other. It has proved satisfactory in every respect. Yours, etc.,

F. H. KRING.

STANTON, ILL., July 30th, 1878.

KIDDER & LAIRD:

Gentlemen—Please send me one pound of Kidder's Saccharated Pepsine. This makes two and three-quarter pounds. I have used it mostly in prescriptions, and prescribed it in my practice, and find it a reliable article. Yours, etc.,

GEORGE BLEY, M. D.

STONE CREEK, ILL., June 15th, 1878.

KIDDER & LAIRD:

Gentlemen—I gave forty grains, in ten-grain doses, and it acted like a charm; shall use no other.

Yours, etc., L. HOBIE, M. D.

WELLINGTON, ILL., March 2d, 1878.

KIDDER & LAIRD:

Gentlemen—I shall be glad to avail myself of another supply when needed. I have tested it, and find it fully up to your representations.

Yours respectfully, DANIEL WESTON.

INDIANA.

GALVESTON, IND., July 8th, 1878.

KIDDER & LAIRD:

Gentlemen—I have given your Kidder's Saccharated Pepsine my careful attention, and find it a splendid preparation. I can recommend it in my practice on account of its good qualities.

Yours, etc., B. U. LOOP.

INDIANAPOLIS, IND., July 12th, 1878.

KIDDER & LAIRD:

Gentlemen—Have given Kidder's Saccharated Pepsine in a number of cases of dyspepsia; also given it to the physicians in this locality, who were well pleased with the superior quality of it.

Yours, etc., S. J. HILLMAN, M. D.

SULLIVAN, IND., July 11th, 1878.

KIDDER & LAIRD:

Gentlemen—I have prescribed your Saccharated Pepsine, and recommended it to several physicians, who have used it and pronounce it a first-class article.

Respectfully yours, H. MALOTT, M. D.

WATERMAN, IND., July 19th, 1878.

KIDDER & LAIRD

Gentlemen—I have ascertained from three doctors in my neighborhood that your Kidder's Saccharated Pepsine is a better article than some of the more expensive preparations. Yours, etc.,

OLIVER LA TOURETTE.

LOUISIANA.

DELHI, RICHMOND PARK, LA., March 20th, 1878.

KIDDER & LAIRD:

Gents—When in need of Pepsine will always order Kidder's in preference to all others, as I like it best.

Yours very respectfully, E. W. THOMSON.

MANSFIELD, LA., Jan. 31st, 1878.

KIDDER & LAIRD:

Gents—I know it to be an excellent remedy, and shall in future keep it always on hand, both for my practice and myself. Yours respectfully,

R. T. GIBBS, M. D.

MARYLAND.

ANNAPOLIS, June 20th, 1878.

KIDDER & LAIRD

Gentlemen—Since the reception of your sample of Kidder's Saccharated Pepsine we have used no other. We consider it a first-class preparation. We have never heard anything to the contrary. We shall continue to dispense it unless well-founded objections are made, which we do not fear. We purchase from Messrs. Thomsen & Muth. Yours, etc.,

J. F. PERKINS & BRO.

BALTIMORE, June 19th, 1878.

KIDDER & LAIRD:

Gentlemen—I am using Kidder's Saccharated Pepsine with a great deal of satisfaction. I tested it with Scheffer's, and could not detect the least difference, and, in consequence, have had a number of pounds of yours, purchased from Thomsen & Muth.

Yours, etc., ISAAC R. BEAM.

BALTIMORE, June 19th, 1878.

KIDDER & LAIRD:

Gentlemen—Your Kidder's Saccharated Pepsine appears to be all you claim for it. I have not bought a grain elsewhere since I commenced using yours.

Yours, etc., C. A. GOSNELL.

BALTIMORE, MD., June 20th, 1878.

KIDDER & LAIRD:

Gentlemen—Your Kidder's Saccharated Pepsine has given good satisfaction. It is all you claim for it. Will hereafter use none but Kidder's.

Yours, etc., A. C. HUTHWELKER.

181 LEXINGTON ST., BALTIMORE, MD.

KIDDER & LAIRD:

Gentlemen—Have used Kidder's Saccharated Pepsine for the past year with entire satisfaction. I use no other except specially prescribed. I obtain my supply from Messrs. W. H. Brown & Bro., or Messrs. Thomsen & Muth, Baltimore.

Yours, etc., H. C. MOORE, M. D.

BALTIMORE, June 21st, 1878.

KIDDER & LAIRD:

Gentlemen—I have used Kidder's Saccharated Pepsine alongside Scheffer's, Boudault's, and others, as ordered, and have no reason to believe yours below the standard.

Yours, etc., JOHN SCHWARTZ.

CUMBERLAND, MD., Jan. 21st, 1878.

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Soluble Pancreatin,	**5 grains.**	**Hyocholic Acid**	**1-20 "**

Dose —Two teaspoonsful alone, or mixed with twice the quantity of soft water, to be taken thrice daily with meals.

The principles upon which this discovery is based have been described in a treatise on "*The Digestion and Assimilation of Fats in the Human Body,*" by H. C. Bartlett, Ph. D., F. C. S., and the experiments which were made, together with cases illustrating the effect of Hydrated Oil in practice, are concisely stated in a treatise on "*Consumption and Wasting Diseases,*" by G. Overend Drewry, M. D.

In these treatises the Chemistry and Physiology of the Digestion of the Fats and Oils is made clear, not only by the description of a large number of experiments scientifically conducted, but by cases in which the deductions are most fully borne out by the results.

☞Copies of these valuable works will be sent free on application.

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The permanence and perfection of the emulsion, and the extreme solubility of the HYDRATED OIL, solely prepared and sold by us under the name of HYDROLEINE, is shown by its retaining its creamlike condition as long as the purest Cod Liver Oil will retain its sweetness. Unlike the preparations mentioned, or simple Cod Liver Oil, it produces no unpleasant eructation or sense of nausea, and should be taken in such very much smaller doses, according to the directions, as will insure its complete assimilation; this, at the same time, renders its use economical in the highest degree.

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Many prominent physicians, aware of its genuine merits, sanction its use, and are in the habit of prescribing it in their practice; it has, therefore, become a popular medicine, and especially so in those sections of the country where it is best known.

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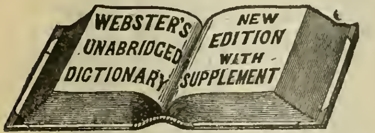

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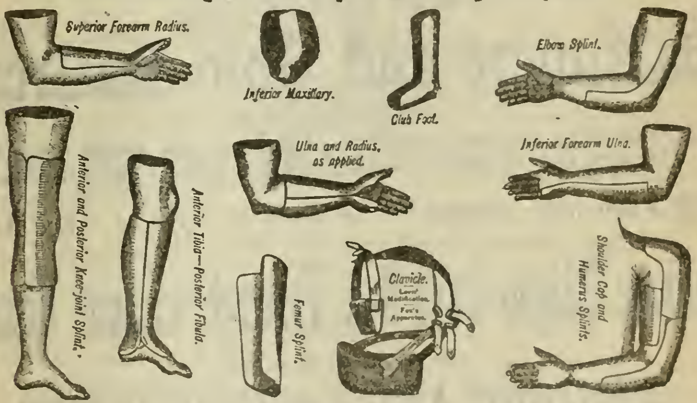
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We wish to announce, that owing to the large demand for our goods and the constant importunity on the part of *Surgeons* everywhere to place our Splints on sale with their Instrument Dealer or Druggist, to afford them greater convenience and facility in obtaining the pieces in duplicate, **we have at last acceded to that request, and hereafter** *JOHNSTONE'S CELEBRATED FELT SPLINTS* **can be obtained at most dealers in Instruments and Drugs throughout the United States, at the same price which they were heretofore sold, viz:**

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Speaking of **HORLICK'S FOOD:** "Being carefully prepared, according to Liebig's Formula, by Chemists fully competent, it possesses certain advantages, such as quick and easy preparation and a pleasant flavor, and is therefore highly esteemed by those who have used it." [Page 58 *of the fourth edition of a Treatise on Diseases of Infancy and Childhood. By J. Lewis Smith, M. D., etc.*—1879] Also, speaking in another place [page 647] of artificial food for infants, especially those suffering from intestinal catarrh, he says: "I prefer Liebig's, especially **HORLICK'S** preparation of it."

Report from Bellevue Hospital, New York.

In *The Hospital Gazette* for February 6th. 1879 [page 108] Dr. E. Hochheimer makes a report from Bellevue Hospital of a case of Infantile Paralysis. which was followed by an exhausting diarrhœa—Speaking of the treatment, he says: "Her condition continued unchanged for the next three weeks; she was put upon a diet consisting principally of milk, but the diarrhœa persisted in spite of opiates and astringents."

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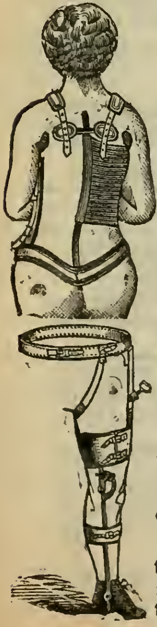

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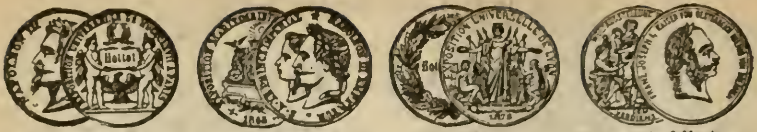

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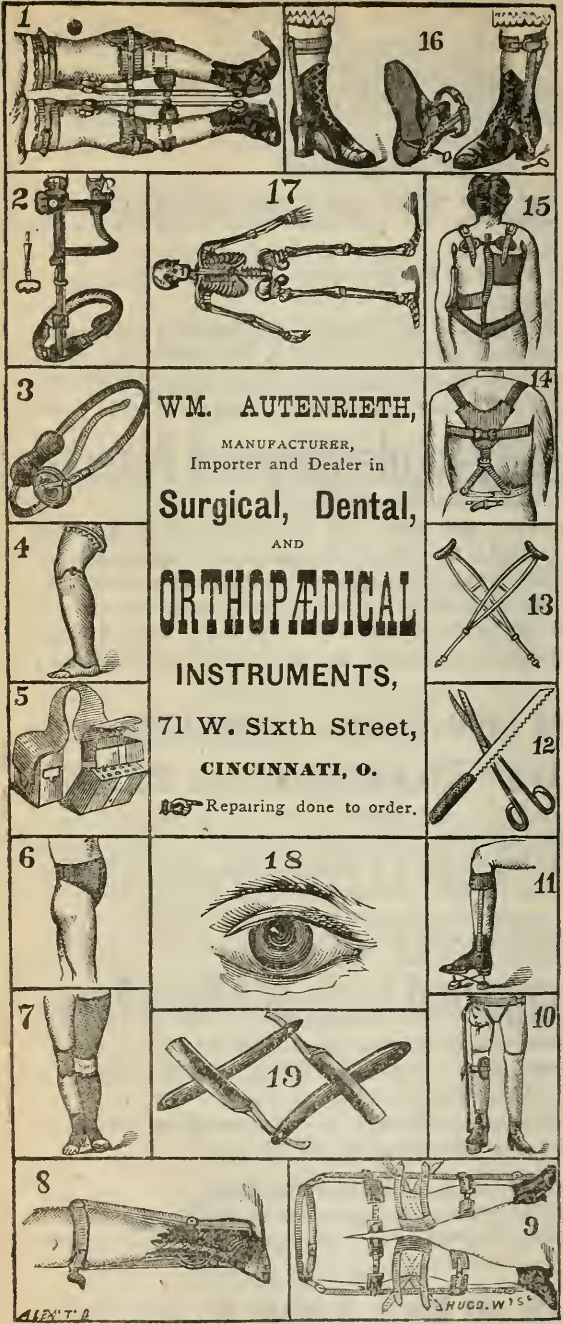

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